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Thus it will be seen that if man has passions which impel him to the destruction of man, if he be the only animal who, despising his natural means of attack and defence, has devised new means of destruction, he is also the only animal who has the desire, or the power, to relieve the sufferings of his fellow citizens, and in whom the co-existence of reason and benevolence attests a moral as well as an intellectual superiority.—GRAVES' CLINICAL MEDICINE.

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SOME OBSERVATIONS IN RELATION TO CASES OF FEVER IN RICHMOND, INDIANA, DURING THE MONTHS OF SEPTEMBER AND OCTOBER, 1869.

BY J. R. WEIST, M. D., RICHMOND, INDIANA.

(Read before the Union District Medical Association, at Rushville, Indiana, October 28, 1869.)

During the past two months quite a number of cases of febrile disease have fallen under my notice, that have presented some features not usually met with in the fevers prevailing in this locality in the autumnal season, at least not so far as my personal observation extends; and it seems to me to be worth while to make some record of them, both for the purpose of present comment and future comparison.

The peculiarities adverted to have been noticed in the manner of invasion, the symptoms presented during the progress, and in the duration of the disease.

Except that the first well marked evidence of disease was the occurrence of a chill of variable duration, these cases presented no uniformity in the method of invasion; the occurrence of the chill in some cases being preceded for days and even weeks by a feeling of indisposition, with a loss of appetite and strength, while in others the chill was the first evidence of impending disease. The occurrence of this paroxysm was not limited to any particular portion of the

twenty-four hours—sometimes coming on in the night. This occurrence of the paroxysm in the night was one of the first features that directed attention to the disease as differing from the ordinary cases of intermittent and remittent fevers, as in these paroysms very seldom occur in the night. Another marked feature in many of these cases, in this stage of the disease, was the intense pain complained of by the patient. This was most frequently in the back of the head, neck and shoulders—not unfrequently, however, it existed elsewhere, and especially in the limbs. Very often in connection with the pain in the head, neck and shoulders, tenderness and stiffness of these parts was complained of.

In some of the cases sore throat was complained of, either in the beginning or soon afterward. In these cases traces of inflammation and enlargement of the tonsils were seen on examination, and in a small number the tonsils were seen to be dotted with small patches of what appeared to be diphtheritic deposit.

In addition to the special features mentioned as belonging to the period of invasion, the chill presented the ordinary characteristics of the intermittent type of fever. Febrile reaction of variable intensity and duration followed the chill, which in some of the cases, in time, gave place to a sweating stage and a more or less complete intermission. In some cases these distinct paroxysms, so closely resembling those of intermittent fever, as early in my experience to be mistaken for those of that disease, occurred for several days, before giving place to a series of phenomena more nearly resembling those seen in cases of remittent fever, while in others the remittent type was assumed in the outset of the disease.

In addition to the throat trouble that I have mentioned as belonging to some of the cases in the earlier stage, other irregular manifestations were observed. Slight hemorrhage from the nose was common. In some patients an eruption on the skin, having some resemblance to roseola or scarlet-rash, was seen. Marked evidence of disturbance of the nervous system existed in most cases; this consisted in disorder of the mental faculties, and a disturbance of sensation and motion; hyperæsthesia of the skin sometimes being present, while at other times it was in a state of partial anæsthesia; temporary partial paralysis of the extremities existed in a few cases.

The skin was in a number of cases slightly jaundiced. The tongue in the beginning was usually but slightly furred; the coating, however, gradually increased in thickness, assuming successively a yellowish

brownish, and in the worst cases, almost a black color. A tendency to dryness of the tongue showed itself early in the disease—the dryness nearly always being much more marked during the night, and this almost irrespective of the period of greatest febrile reaction. very often during the second week of the disease the tongue became less dry and cleared itself of its coating, assuming thus in the more marked cases, the glossy, varnished appearance not uncommonly met with in different kinds of fever, to soon become as dry and rough as before.

The pulse was increased in frequency even in the intermissions, in those cases in which the apyrexia was most marked, it seldom, during this period, falling below ninety, going up from this number to one hundred and twenty or one hundred and thirty, during the access of fever. After having had some experience with the disease, this frequency of the pulse in the absence of fever, enabled me to make out a correct diagnosis early in the disease, even in those cases in which the intermittent type was most developed. Nausea and vomiting were occasionally present, but did not constitute marked features of the disease. In the commencement the bowels, if disturbed, generally inclined to constipation, while in the majority of cases a tendency to diarrhœa manifested itself at some period of the disease. This, according to my observation, was easily controlled. The tendency to diarrhœa and the susceptibility to the action of cathartic medicines were much less than I have usually met with in typhoid fever. In none of my cases did hemorrhage of the bowels occur. Slight tympanites and iliac tenderness were almost invariably present.

When the cases were intermittent in the beginning, they soon lost this feature, becoming more nearly of a remittent character. A marked peculiarity was shown in the irregularity as to time of the remissions and exacerbations, these varying from day to day, most commonly, however, the greatest access of fever occurred at night. In this respect these cases offer a strong contrast to cases of ordinary remittent fever, as in the latter the remission usually occurs at night.

In most of the cases the remissions continued to take place at irregular intervals throughout the disease; yet in a certain number the fever gradually assumed very nearly the continued form.

In the temperature of the body considerable variation was noticed. In none of the cases, however, did it become very high. In a few of the later cases the degree of heat was positively determined by means of the thermometer in the axilla; in these the temperature ranged

from ninety-six deg., in the cold stage, to one hundred and three deg. during the greatest febrile excitement. In the majority of cases the range of temperature was, I believe, limited to about four deg., while, as a general rule, the highest degree of temperature was attained in the evening, and the lowest in the morning—frequent exceptions were noticed. In three of the best marked cases, during the first week the lowest temperature was reached between midnight and three A. M., and the highest between six and nine A. M., and during the second week, the lowest between six and ten A. M., and the highest between six and twelve P. M. Yet it is not to be understood that these extremes of heat and cold occurred with regularity between these periods, during the times mentioned; for they did not. Indeed, during both weeks there was extreme irregularity in this respect—the times given representing only those at which the extremes of temperature were noticed. Another feature somewhat out of the usual course, was the occurrence, often, of two and sometimes of three well-marked exacerbations in the twenty-four hours.

During the latter part of the first week, and the whole of the second, profuse swetting often took place—it coming on during the decline of the febrile stage, and sometimes continuing for five or six hours, being thus extended not only through the time belonging to the sweating stage of ordinary intermittents, but through the intermission or remission, and even into the cold stage; and being sometimes more profuse than I have ever witnessed in any disease.

In some cases, differing apparently but little if any from ordinary remittent fever, after the disease seemed to have almost yielded to the usual remedies, profuse sweating occurred in connection with extreme coldness of the surface—the cases afterward assuming the form and running the course of typhoid fever.

The pain in the neck, head and shoulders was often extreme. It was not rare for the patient to complain of severe neuralgic pain in the extremities. In connection with the same nephalgia, intolerance of light sometimes existed.

The "intolerable headache," and the "bone-breaking pain in the extremities," for so they were described by the patient—seldom lasted beyond the eighth day.

The mental disturbance usually was not extreme, and made its appearance during the second week in the form of quiet delirium, being in most cases decidedly more marked during the night than during the day. Hallucinations were not uncommon—other cases of irregular nervous action were presented. The modifications of cutaneous

sensation have already been noticed, as well as the incomplete motor paralysis. In a portion of the cases insomnia existed during the first and second weeks, while in others the patient slept almost continuously for three or four days and nights. I say slept, for the insensibilty to external impressions seemed to be owing more to sleep than a semi-comatose state. These two opposite conditions were often present in the same patient at different periods.

As I have already intimated, the fever toward the end of the second week assumed a character more nearly akin to the typhoid than the remittent type. In addition to the symptoms presented by the tongue, pulse and nervous system, already described, that are common to several forms of fever, others that belong more especially to typhoid fever presented themselves. These were a tympanitic condition of the abdomen, tenderness in the iliac regions, and diarrhœa, or at least an increased susceptibility to the action of cathartic medicine. At this stage a slight evidence of pulmonic inflammation was usually present. The characteristic eruption of typhoid fever was observed in but one case.

All of the cases recovered—convalescence becoming almost imperperceptibly established, and proceeding in a manner similar to that observed after cases of typhoid fever.

The duration of the disease varied from three to five weeks.

Another item of some interest that I omitted to mention in the proper place was, that although the worst patients were evidently seriously sick, they retained their strength to a surprising degree. Whether this was the result of a peculiar feature of the disease, or in consequence of the absence of perturbating treatment, I am not prepared to say.

While the disease here briefly described presents some resemblance to remittent typho-malarial, relapsing, break-bone and typhoid fever, I think it can not be clearly identified as either.

SULPHITE OF SODA.

BY GEORGE KELMER, M. D., SULLIVAN, ILL.

(Read before the Æsculapian Society of Wabash Valley, October 28th, 1869.)

(The first part of Dr. Kelmer's paper is occupied chiefly with Prof. Polli's and Dr. De Ricci's investigations, and the recorded experiences of several American Physicians: these observations are familiar to

reading physicians, and therefore in publishing, we omit all but the Doctor's own experience with the agent.)

In dyspepsia its efficiency has been most marked, especially when accompanied by flatulence and eructation—these symptoms being the result, doubtless, of decomposition and fermentation of foreign material in the stomach itself, from one or more causes. It may be owing to deficiency of the gastric juice, the privation of some of its essential ingredients, or to a defective capacity of the circulatory or nervous functions (upon the integrity of which the function itself is greatly dependent); the contents of the stomach must undergo the decomposition and fermentation which invariably occur with all dead animal and all vegetable matter, when confined in vessels and subject to the continued influences of heat and moisture. To this natural operation are due the generation of gases which produce flatulence, nausea and eructation of food so frequent in dyspepsia, and also epigastric pains, diarrhœa, disentery, colic, hepatic congestion and torpor, so frequent from the presence of foreign masses thus retained and imparting, to a greater or less extent, fatal and injurious ingredients to the blood by absorption. To arrest the process of decomposition and fermentation, I have found in my practice no means so efficient as the sulphite of soda. In such cases it acts as a direct and powerful arrestor and preventive of decomposition of the food, and as an illustration of its value, the following cases (among others) treated by the sulphite of soda, will speak for themselves:

Thomas F., æt. forty.—Has been affected five years, sometimes quite ill, and at other times apparently much better. Bowels inclined to constipation, but irregular in consequence of the too free use of cathartics. Bowels seem quite sensitive, and are very susceptible to cathartic medicines. Appetite indifferent; tongue a little coated, grayish upon the surface, a little reddened on the sides and tip; skin rather dry; does not sleep well at night; has unpleasant dreams of suffocation, and starts in his sleep.

Treatment—Cinchona comp. and cardamons with the sulphite of soda in separate solutions, combining the two at the time of administering. Bathe the body once per day in a cold solution of the sulphite, and use friction freely. Reports ten days after that he feels much improved. Bowels regular; skin improved in being more moist; sleep is better and more refreshing. Continue the treatment for one month. His general appearance much improved—seems entirely well.

In several instances in which flatulence was a very prominent

symptom, one or two doses of the salt appear to have immediately arrested and removed it. In all those cases of "*Cardialgia*," where there seems to be an uneasy sensation at the pit of the stomach, with great heat and burning, sometimes amounting to actual pain, and which frequently extends up into the throat, with difficult breathing, vomiting, coldness of the extremities, and great restlessness and anxiety accompanying it. And in pyrois it acts like a charm, taken after each meal. The sulphite of soda owes its virtues to the fact that it is decomposed by almost any vegetable acid, or by the hydrochloric acid of the stomach, and that this decomposition liberates sulphurous acid, which has great power to prevent alcoholic or acetous fermentation.

Its value in erysipelas I have had the gratification of testing in several cases. In one case in particular, I was most agreeably suprised at its effects.

The patient, a man aged thirty—the disease had attacked his right hand and arm, extending almost to the shoulder. The hand and arm were enormously swollen, tense and hard, with one or two patches which assumed a decided gangrenous character; pulse one hundred and twenty per minute; respiration hurried; skin hot and dry; tongue thickly coated; throat dark red, and tonsils swollen; urine scanty and highly colored. The patient was ordered three grains of quinine every three hours, with a teaspoonful of the following, intermediated:

℞ Sodæ sulphitis, ℥i,
Ex. glycyrhiz, ℥i,
Aquæ font., ℥iii.
M.

And, as a local application, one ounce of the sulphite dissolved in a quart of water, and applied to the parts affected by means of cotton batting, over which a piece of rubber cloth was put to prevent evaporation. Beef tea allowed *ad libitum* and free ventilation was strictly enjoined. At the expiration of twenty-four hours there was a marked improvement in all the symptoms. The quinine and soda were continued at longer intervals, and in twelve days the patient was convalescent.

It is not necessary to refer to all the cases of erysipelas in which I have given the soda a trial, as the case mentioned is analogous to other cases which have been successfully managed with this salt. If any of those who have not used the sulphite of soda will give it a trial, both internally and externally, they will doubtless come to the

conclusion, as I have, that it is one of the best among all known remedies for the control and management of erysipelas.

In tinea favosa there is no local remedy whose use, in my experience, has been attended with better and more speedy results—as the following old and inveterate cases will show:

Juli McD., age ten.—Tinea Capitis (Favosa). Has been afflicted three years. The back of her head only is affected, and in this location it resembles (granulata) sores, small, and of about two lines in diameter; secretions fetid; hair matted, forming large scabs over the sores. General health much affected; skin pale; appetite indifferent; habit scrofulous; slight enlargement of cervical lymphatic glands, probably from sympathy with the *Tinea*.

Cornelius Cage, age seven.—Tinea Capitis (Favosa). Disease commenced about six months ago, by inoculation from a comb. At first there was only a small pustule, secreting an ichorous and fetid matter. From this the disease extended to the border of the neck and forehead, with a number of very large sores upon the scalp, and the interspaces were covered with thick heavy scales and small scabs; the hair had been trimmed off closely with scissors. Fetor of the part, resembling the urine of the cat. Lice and their ova had collected in quantities upon the head and burrowed among the scabs.

Joseph L., aged twelve years.—Tinea Capitis. Had an eruption upon the top of the head, covering the whole surface between the parietal protuberances, and extended from near the forehead to the summit of the back of the head. The eruptions were yellowish, with deadened base, and contained a mucoid secretion resembling honey.

The mode of treatment in all the cases was as follows:

℞ Sodæ sulphitis, ℥ss;
Acid carbolici (crys), ℥ss;
Glycerine, ℥iss:
Cerati simplicis, ℥ii.
M.

Ointment to be used three times a day. Shave the hair from the sores, and cleanse them with castile soap and water; apply the ointment on the parts; cover with oil-silk; give, internally, sulphite soda in twenty-five grain doses, in cinchona and cardamon comp, combining the two at the time of taking, three times a day; and in from three to four weeks a permanent cure will be effected.

SCABIES.

I have used it in this class of diseases with decided success, and it

can be relied upon as a speedy and effectual remedy in almost all parasitic affections of the skin. I have also used it in various other cutaneous diseases with uniform and unvarying success. And in that condition of the blood which is manifested by the production of numerous furuncles, commonly known as boils, the administration of sulpite of soda, with carminative tonics, has proved, under my observation, a perfect and rapid remedy. In carbuncles, I know, after using the following, that it may be relied upon. After a forced or spontaneous opening of the carbuncle, apply a solution on lint, of, say,

℞ Soda sulphitis, ℥ss;
Acidi Carbolici (crys), ʒss;
Glycerine, ℥iii.
M.

It is remarkable how rapidly, under these applications, the ordinarily slow separation of the necrosed cellular tissue takes place—the destructive process ceases, and healthy granulations spring up.

In urticaria, it has proven very successful in subduing the worst forms of this disease in twenty-four hours. There are a great many other skin diseases in which I have found it equally efficient.

Another application of this salt which I consider valuable, is in the case of infants, by whom their food (the mother's breast-milk) is often ejected. A dose of two to five grains of sulphite, in combination with comp. cardamon, sweetened, has proved successful in causing a retention and assimilation of the contents of the stomach when administered soon after imbibition, thus greatly promoting the health of the child. Also in cases of children where there is a fermented, swollen condition of the bowels, especially if constipated, the sulphite of soda will remove the difficulty in a short time.

I am of the opinion that the sulphite of soda, one ounce to the quart of water, makes one of the best solutions that has ever been discovered to sponge the body with in all kinds of fevers.

There are three forms of this remedy, viz: The sulphite, the hyposulphite, and the bisulphite. The first of these has been my principal dependence; though the others, when employed in proportionate quantities, for the supply of the acid constituent, are equally useful

FORTY YEARS' PRACTICE, OR REPORTS OF EXTRAORDINARY CASES.

BY N. FIELD, M. D., JEFFERSONVILLE, INDIANA.

About the year 1831, I was called to see a little son of Mr. John Myers of Jeffersonville, three or four years of age, who, to all appearance, had a regular attack of billious remittent fever, which was at that time endemic in and around Jeffersonville. As the case occurred in midsummer, and seemed to be a plain case of ordinary fever, I commenced the treatment with a cathartic, followed by a diaphoretic, with the view to bring on an intermission. In the course of thirty-six hours after he was taken sick, there supervened a most extraordinary and intolerable thirst. His cries for water were incessant. He would drink until his stomach was distended to its utmost capacity, and still plead for more. The repletion of the stomach would occasionally provoke emesis; and just as soon as it was emptied, he would drink as long as he could force a drop down his throat. At last, after two days spent in trying to relieve the distressing thirst, I directed his mother to withhold all but a reasonable quantity of water, despite his cries and importunities. He became at times almost frantic, and when not confined, he would leap from his bed and struggle desperately for the water-bucket. Foiled in his attempt to seize that vessel, he would run into the kitchen, and try to drink soap-suds, dish-water, or any thing in the liquid form, however filthy and loathsome.

There being no evidence of gastritis or enteritis, but on the contrary a pulse but little variant from the natural standard; skin preternaturally warm; no pain in the epigastrium, or soreness on pressure, and loose bowels, I was utterly unable to account for the insatiable thirst with which he was afflicted. Supposing that an emetic might allay his thirst and produce some favorable change in the case, I gave him a strong dose of ipecacuanha, which resulted in the ejection of a conglomerate mass of mackerel, eaten about a week before he was taken sick. The fish had no doubt been swallowed without mastication, in too large a bulk for transmission to the duodenum.

A few hours after it was discharged the fever, thirst and every other morbid symptom subsided.

The question involved in this case is, how did the mackerel produce such intense thirst? Was it by its mechanical action on the coat of the stomach, causing sub-cutaneous inflammation; or was it the salt in the fish; or what was it?

URINARY INFILTRATION: A REPORT MADE TO THE CINCINNATI ACADEMY OF MEDICINE.

BY PROFESSOR P. S. CONNER, M. D.,

(Chairman of Section on Urine and Urinary Organs.)

Rupture of the urethral wall with consequent escape of urine into the tissues adjacent, though fortunately, not a very common accident, is sufficiently often met with to entitle it to careful consideration in view of the resulting danger to part and life. In the great majority of cases it is consequent upon stricture of the urethra that has existed for years, or is the result of external injury, the perineum having been violently contused—stricture being by far the most common cause. Leaving out of consideration ante-scrotal lacerations, the urethra may be opened between the peno-scrotal angle and the anterior layer of the triangular ligament, or betwwen this layer and the neck of the bladder; in the former situation, the cases being most common, in the latter most fatal, especially when the urine has made its way through the pelvic fascia.

Stricture being, as already stated, the most frequent cause of the lesion in question, and the greater number of strictures being situated in the bulbous portion of the urethra, the laceration is generally found but a short distance anterior to the triangular ligament. A long continued progressive dilatation of the canal behind the stricture having taken place, the urethral wall at length becomes so thin as to be unable to resist the powerful efforts made to expel the urine, and a laceration is the result. In many cases, indeed, in the majority, not only is there this thinning of the wall from dilatation, but also an ulcerated condition of it consequent upon chronic inflammation, due both to the stricture itself and the constant, or almost constant presence of urine in the pouch formed, and this ulcerated condition causes an

earlier rupture than would take place were there simply a thinning of healthy wall. The symptoms of rupture and infiltration, when the laceration is extensive and the urine freely poured out, are unmistakable. The sudden relief of vesical distension experienced by the patient, the early swelling (at first generally in the perineum, soon involving the scrotum), the rapid development of violent inflammation followed by gangrene of the parts affected, the shock and speedy manifestation of severe constitutional disturbance, all combined with the history of the case, make diagnosis an easy matter. The locality of the early swelling serves as a guide to the determination of the position of the urethral rupture. When the laceration is in front of the triangular ligament, the close union between the superficial perineal and the deep fascia compels the urine to travel forward, so as to successively invade the anterior part of the perineum, the scrotum, the penis and abdominal walls in front, traveling upward in some cases as high as the axilla. It may, in two ways, reach the anterior face of the thighs. 1st, by traveling along under the superficial abdominal fascia to the lumbar region, and then over the crest of the ilium and down upon the outer aspect of the thigh; and, 2d, by involving the superficial abdominal fascia, and passing along in the subcutaneous areolar tissue, over Poupart's ligament. When the laceration is in that portion of the urethra behind the anterior layer of the triangular ligament, the urine may break through the anterior layer and follow the same course as when the laceration is in front of the ligament, or, as is more common, it may force its way through the posterior layer, into the space intervening between the pelvic and levator fasciæ. From this space it may pass downwards through the levator fascia, when the swelling will be first noticed in the ischio-rectal fossæ, or upwards through the pelvic fascia, opening the cavity of the pelvis. The fatal result of lithotomy is sometimes due to urinary infiltration, following the last mentioned course, the fascial reflection covering the prostate having been cut through at time of the operation. When the laceration of the urethral wall is the result of external violence that has not made a wound in the integument, the hemorrhage from the meatus, and the extensive and early appearing swelling in perineo will indicate the probable character of the accident, and after a few hours, or at most days, the development of the characteristic symptoms of urinary infiltration will leave no room for doubt.

A patient with urinary infiltration being let alone, death may result at an early period in consequence of shock, or later, from the exhaustion

due to extensive suppuration, acting upon a constitution already impaired, in a majority of cases, by excesses and organic disease of the bladder, kidneys and liver. Under the most proper and carefully directed treatment, death is not an infrequent result; and at best, the individual recovers only after more less loss of substance; for, as Bichat has said, "there is no other fluid in the animal economy the effusion of which is so baleful as is that of the urine."

The primary and most important remedial measure to be adopted is free incision, in the middle line of the perineum, further out towards the rami of the ischium and pubis, through the integuments of the scrotum, on the penis, one or other, as necessity may require, in order that the extension of the infiltration may be arrested. Upon two points in the treatment opinions are divided, viz: as respects the advisability of the early introduction of the catheter, and as to the necessity and propriety of perineal section. Of the various authors whose works I have been able to examine, who refer to this particular point in reference to the treatment of the accident under consideration, Berard, Desault, Lassus, Amussat, Brodie, Colles, Guthrie, Druitt, Erichsen and Gross advise the introduction of the catheter immediately after the incisions have been made, such catheter to be either left in or introduced several times a day. Richerand advised catheterization only after cicatrization of the wounds made had proceeded to a considerable extent. Delpech recommended in cases of infiltration from injury, the use of the elastic catheter after the first violence of the inflammation had subsided.

Bumstead says: "Nothing can be done for the relief of the stricture during the continuance of the shock consequent upon rupture, but usually as this passes off, catheterism may be successfully performed."

Sir Henry Thompson says: "You will be safer in letting the catheter alone and permitting the water to drain off. When the water flows off by another passage, the urethra begins to improve, and in three or four days you will probably have no difficulty in passing a number 3 or 4 catheter."

In a case under my care, not long since, where the rupture occurred in or very near that portion of the urethra covered by the scrotum, and in which the extravasation had taken place at least forty-eight hours before I saw the patient, in a very few hours after free incisions had been made urine was readily passed in a larger stream than had been possible for months previous. The special advantage claimed to be derived from the early use of the catheter is the prevention

of the passage of the urine through the abnormal channel, thus favoring cicatrization, while at the same time the stricture is being dilated. But when free incisions have been made, a ready outlet for the urine is afforded, it rapidly loses its unhealthy character, and its passage through the wound hinders cicatrization but little if at all. The very early introduction of the catheter is sometimes impossible, at best not easily effected; the presence of the catheter, if left in, is irritating, and adds to the unhealthy condition of the urethra and bladder. Its use is not necessary, for the tightness of the stricture is in a measure relieved by the free exit allowed the urine through the rupture, and the treatment of the stricture either by dilatation or otherwise, though very important, is for the time being of little moment in comparison with the relief of the peculiar and dangerous symptoms consequent upon infiltration. Even in cases of urethral laceration from external injury, where perineal section has been performed not only with a view to the relief of the immediate symptoms, but still more the prevention of a traumatic stricture, and where it is desired to preserve as perfectly as may be the normal calibre of the urethra, the use of the catheter is not demanded until after the separation of the sloughs. As respects the necessity and propriety of perineal section, there exists a decided difference of opinion. Where the infiltration has taken place in consequence of external injury which has not produced a wound of the integument, a free perineal incision not involving the urethra, with a judicious after-use of the catheter, will in many cases be all that is required. But when the urethral wall has to a considerable extent been lacerated and contused, the free laying open of the urethra will go far towards preventing a subsequent closure either complete or nearly so of that part of the canal included within the contused area, and it is this closure that is the special danger to be apprehended in this sort of injury. But when the infiltration is a consequence of stricture, is it advisable to so make the perineal incision as that the strictured portion of the urethra shall be laid open, or shall the incisions be made with reference only to the giving exit to the extravasated fluid, deferring until a later day direct treatment of the stricture? With reference to this subject Amussat says:

"It is usually advised not to injure the urethra. However, when there exists a large depot from infiltration, is it not better to freely open the canal at that point which is the seat of stricture? If we adopt the measures insisted upon by writers, when the urinary depot has been opened, as the urine can not pass out by any direct channel, and as the stricture still remains, a second infiltration is to

be feared, and the difficulty of carrying a catheter into the bladder remains always the same. On the contrary, if, after opening up the depot, the original obstruction be cut through (which may done by carrying a catheter down to the stricture and letting its point serve to indicate the point from which the incision shall be made), we may at once introduce the catheter into the bladder, and thus hasten very much the cicatrization of the wound, and prevent any new infiltration."

If the stricture is permeable and a catheter or staff can be carried through it to serve as a guide in the incising of the strictured and ruptured portion of the urethra, perineal urethrotomy is not an operation of any very great difficulty; but if the case is one in which a catheter can be carried into the bladder at the time when the perineal incisions are made, it is one in which the evil consequences of the infiltration can be as fully prevented by proper incisions not involving the urethra, as by urethrotomy, and one in which a fair trial should be made of dilatation in the treatment of the stricture. If the stricture is not permeable, the laying open of the urethra without the aid of a guide other than the point of a catheter, that resting upon the external face of the stricture shall serve, as Amussat says, as the "point of departure" for the incision, such operation, as Bichat said of it, "is one always difficult and often impracticable." In the words of Colles:

"When you can not introduce the catheter, you are directed to cut down through the perineum and urethra on the point of the catheter, to find out the impervious part of the urethra, to cut through it, and pass on the instrument to the bladder by the inferior opening. Now the great difficulty is to find this opening, or to find the urethra at all. I assure you one of the most expert surgeons in the kingdom was an hour and half cutting here and there, looking for the urethra, and was at last obliged to put the patient to bed without finding it. The great difficulty is to find the urethra."

But whether the opening of the urethra is difficult or easy, if the operation is necessary and the neglect of its performance will materially lessen the chances of recovery in cases of urinary infiltration, it should be performed, or at least attempted. But if as has been repeatedly shown, free incisions through the swollen and infiltrated subcutaneous areolar tissue are sufficient to arrest the infiltration and give exit to the urine, and if, after such incisions, the strictured portion of the urethra dilates in a few hours or days to such an extent as to pass a number 2, 3 or 4 catheter, it is not, as a rule, advisable to perform external perineal urethrotomy because there has been a rupture of the urethra and extravasation of urine. The operation diminishes

to a certain extent the patient's chances of recovery, and under the most favorable circumstances death is to be feared.

I had hoped to have been able to present to the Academy some statistics of the mortality of the accident under consideration; but the figures obtained as yet are too small to warrant any satisfactory statement as to the comparative per centage of deaths and recoveries.

VENTILATION AND VENTILATORS.

BY WILSON HOBBS, M. D., CARTHAGE, INDIANA.

Read before the Union Medical Society, at Knightstown, Indiana, at their November session; referred to the Committee on Publication, and by them presented to the *Western Journal of Medicine*.

MR. PRESIDENT—My paper for to-day may be considered as doubtfully coming within the constitutional provision which requires each member, at each meeting, to report a case or read an essay of his own writing upon a medical subject. What I shall say upon the topic selected relates more especially to the sciences of natural philosophy and chemistry—but I shall attempt to apply this knowledge, not to the cure of disease, but to its prevention, by the removal of some fruitful causes of disease and death.

It is as much the duty of the intelligent physician to inform himself upon sanitary and hygienic questions, by which he may be able to give advice for public as well as private use in relation to the preservation of health, as to arm and equip himself for battles at the bed-side, and he is a lame workman in the beneficent mission of the science of medicine who is not well informed upon such subjects.

Our thinking men are just now saying and writing much upon the varying and changing types of disease and the corresponding changes in plans of medication; and I have often thought if we would carefully study the changes in the habits of our people, which advancing civilization is producing, we should find more satisfactory solution and remedy for these differences of type than elsewhere.

The necessity of pure air for respiration need not be considered here; nor need we stop to discuss the question whether poisons sufficient to produce disease may be introduced into the blood by the respiratory organs: these are established theorems.

In the primitive states of society, when the people spend most or all their time in the open air, or in wide and airy tents or huts, there is little need of disquisitions upon ventilation and pure air—their supply comes direct and uncontaminated from the broad ocean above and around, with nothing to confine its circulation or obstruct the supply; but when, according to the custom of modern, civilized and enlightened nations, we shut ourselves up in close rooms, we have great need to study the conditions of health as they relate to this subject.

Age after age we are becoming more effeminate. Our fathers and mothers lived in log cabins with puncheon floors, loose board ceiling and wide-jam fire-places, with walls through which light and air were never forbidden to enter; in the cities and "better-to-do" localities they had large rooms and open chimneys, which furnished an ample supply of air and kept it constantly in motion, thus preventing the accumulation and concentration of atmospheric poisons.

Small rooms in residences, and close and ill-ventilated ones for assemblies, are modern inventions, as are also stoves and hot-air furnaces. Year after year we are becoming more timorous of the cold, and closer and closer we are shutting ourselves in. The open fire-place, that good old life preserver, which seeks every nook and corner and crevice for a fresh breath, and failing there gives the alarm by a cloud of smoke, which compels the inmates to open a door or raise a window, is now fast passing away, and we are warming ourselves by hot stoves, steam pipes, furnaces and other devices, which allow the air in our rooms to become corrupted, and which provide no sufficient remedy. In rooms heated by stoves, no systematic method of ventilation is usually arranged, the doors and the windows sliding each way being generally considered ample means to change the air—but their proper use for such purpose is so often neglected, that danger and injury to the inmates are not always escaped. For the ventilation of rooms heated by hot-air furnaces and steam pipes, flues are usually provided, but they are not always so arranged as best to accomplish the purpose intended. I have sometimes seen the ventilating register placed near the ceiling—sometimes near the floor—sometimes at intermediate points—sometimes two in each flue, one near the floor and the other at the ceiling. Each of these methods has its advocates. There is at least one right way to arrange this apparatus, and there may be many wrong ones. It is the purpose of this paper to discuss the scientific principles involved in the question, and determine, if possible, which is the correct method.

Where furnaces are used for heating purposes, a current of cold air is made to pass into a chamber where it surrounds the heater, and its temperature is raised to such point as is desired. It is thence conducted by pipes or flues to the apartment which is to be warmed, and there admitted by a register, which is so arranged as to regulate the size of the current. This register should always be placed at the floor of the room, and, by reason of a well known law, the hot air will immediately rise from it to the ceiling. The apartment being before full of air, this current can not long continue unless a way of exit is opened. This is done by means of flues in the wall, leading to the roof, which are also furnished with registers to regulate the outward current. The hot air thus admitted will warm the room in either of two ways—by mixing with and imparting its caloric to the cold air by radiation and convection, or by rising above, displacing and replacing the cold air, if the flues are so arranged as to allow it to do so. The specific gravity of the warm air being less than that of the cold, it will rise to the ceiling, while the heavier cold air will always be found below it. The two will not mix nor come together except as they are forced by currents or by agitation.

Now if the ventilating register be placed near the ceiling, the warm air will pass out of the room, leaving the heavier cold air below but slowly affected in its temperature. The current would be from the lower register to the ceiling, thence to the ventilating register: and were it not for counter-currents and the agitation which these currents would produce in the body of the air in the room, with the slight amount of caloric radiated, the furnace might be kept hot the whole of a cold day without making the room comfortable.

The draft in the ventilating flue, with the registers thus arranged, would be a very strong one, as there would a continuous column of heated air from the cellar to the roof.

If, however, we place the ventilating register at the floor, the heated air will make its way to the ceiling as before; but finding no means of escape, it becomes imprisoned there, pressing upon the cold air below, which immediately seeks exit through the ventilating register. As the currents continue, the heated air gradually fills the room from above downward, and the cold air near the floor is all carried out through the flues to make place for it. Thus the room is quickly heated, the warm air driving out and replacing the cold.

Until the room is thoroughly heated, the draft in the flues, with the ventilating register thus arranged, will be much weaker than in

the former case, because the ventilator is not now filled with hot air as before, but with cold, and which is pressed out by the elasticity of the heated air at the ceiling, not rising by its own specific gravity.

Now, as we pass with the ventilating register to intermediate points on the wall between these extremes, we shall find the effects correspondingly modified, the ventilator always receiving its supply from above the register, and leaving the cold air below.

It will thus appear that with both registers at the floor, the room will be most quickly and most thoroughly heated; and as we pass the ventilating register upward, we increase the body of undisturbed cold air. From this we infer, that if the only purpose of the air flues were to heat the room and maintain its temperature, the registers should both be placed at or near the floor, and if the ventilator is not so arranged, however well the room is heated, there will always be a stratum of cold air near the floor of the room, which will produce cold feet for those occupying it.

When steam pipes are used for heaters, there is no supply-pipe to furnish a current of hot air. The heater should be placed near the floor, where it will be constantly immersed in the cold air. A current of heated air arises from it toward the ceiling, while it is the center of a circle of surrounding currents of cold air passing up to be warmed. The air, as it rises, gradually expands out at the top of the room. As it gradually gives out its caloric, it sinks downward to make room for the lighter and warmer. Thus it continues to sink until again at the floor, when it again comes up to be warmed, and again rises to the ceiling. Thus the air continues to rise and fall, as it receives caloric, and distributes it, mixing and mingling with that about it, until the whole is of equal temperature.

With such a heater there is no need of a ventilating pipe in order to warm the room; there is no fresh air admitted, and hence no demand for exit, except to the extent of the expansion of the atmosphere in the room by the heat, which will easily be accommodated in any building not air tight.

To change the air of a room thus heated, the supply of cold air should be admitted near the heater, where it will be immediately warmed, and the ventilating register placed as in the case of rooms heated by furnaces.

The human body in a limited space of confined air, becomes self-destructive, and an additional use of the ventilator is to carry away the poisons which the air receives from the occupants of our houses, and maintain its purity.

We will now consider what are these poisons, their mode of dissemination, and the means requisite for their elimination.

At the head of this list we will enumerate carbonic acid gas, which is, when respired, a deadly poison. The average amount of carbon daily consumed by an adult, in pulmonary and cutaneous exhalation, in the form of carbonic acid, is about 10.8 ounces, the skin eliminating about one-thirtieth of the amount. The specific gravity of this gas is 1.52, atmospheric air being 1. Hence, by its great weight, it will settle toward the floor of the room and mix with the cold air there.

The average amount of aqueous vapor daily exhaled from the lungs is from sixteen to twenty ounces, the quantity depending upon conditions not necessary now to consider. This is not pure water, but contains in solution carbonic acid, hydrogen, nitrogen, phosphorus and a considerable amount of albuminous substances in a state of decomposition. When exhaled, this vapor has a temperature of ninety-eight to one hundred degrees, and being lighter than the air in the room, will rise toward the ceiling, and diffuse itself with the atmosphere there.

The average amount of fluid daily lost by *insensible* perspiration may be stated at from two to three pounds, and almost any man occupying a comfortably heated room will add a pound or two to this by *sensible* perspiration. Nor is this pure water; besides the mineral salts which it holds in solution, it has a large amount of organic substances in a state of incipient decomposition. This, too, comes to the surface at the temperature of the body, and when liberated, will rise to the ceiling, and mix chiefly with the warm air there.

Besides these principal, there are other impurities in less amount, which emanate from the body, or necessarily occur from our habits of living. Among these may be mentioned small quantities of nitrogen, sulphuretted hydrogen, ammonia, the vapor of saliva and the fumes of various perishing substances which may be present. Most of these substances, from their low gravity, will seek the ceiling and mix with the warm air there.

It is not to be understood that the impurities indicated will not separate themselves in chambers as stated. The atmospheric currents kept up by the access and egress of the air, and other causes producing agitation, will more or less mix them through the whole body of the air in the room; but the greater quantity of each will find the places above assigned them.

Hence it will be apparent that of the substances which should be

carried out of the chamber by the ventilating flues, one class will be found at the floor and the other at the ceiling.

Now if the ventilating register be placed at the floor, it will carry off the cold air and carbonic acid, but leave the atmosphere of the room freighted with the lighter exhalations above enumerated, which have no way of escape. If, on the other hand, the register be placed at the ceiling the hot air and lighter impurities will pass out of the room, leaving the shivering sufferers below with cold feet and breathing carbonic acid. If it be placed at any point between these extremes, it will remove neither class completely, but leave the room poisoned with all by its taking out the best air in it.

No single register can act at the two points where it appears from what has been stated, means of egress are most necessary; hence it is apparent there should be two—one at or near the floor to remove the cold air and carbonic acid, and one at or near the ceiling to afford exit for the lighter exhalations enumerated. The latter will, of course, allow the escape of a quantity of warm air, but as this can not be separated from the impurities to be eliminated, the waste can not be avoided. It may be closed until the room is warmed, and the size of the current afterward graduated according to the number of persons in the room, for reasons which are apparent.

The lower register has a double use—the elimination of the carbonic acid, and the removal of the colder air. It is through this channel that the chief current from the furnace to the roof is to be maintained, and upon its capacity should chiefly depend the supply-draft from the furnace, and the frequency of the change of the whole body of the atmosphere in the chamber. The upper register need not be so large as the lower, for two reasons, viz: 1st, the current through it is a very strong one, for the reason already stated; 2d, this current affords no aid toward heating the room, but rather retards it by carrying off the caloric; its only purpose is to separate the air, and should only be large enough to prevent the concentration of the lighter exhalations.

In assembly rooms the air needs more frequent change, as more persons are breathing it, and these points of exit should have corresponding dimensions.

I may also state here what was omitted at its proper place—that the supply-pipe from the furnace and the ventilating registers should always be placed at opposite points of the room, so as to compel the currents of air to traverse the whole chamber.

SPERMATOZOA.

BY W. H. LEMON, M. D., BRAZIL, INDIANA.

In prosecuting, recently, some microscopic researches in entomology, in behalf of the New Albany Society of Natural History, those tiny creatures led me away by their charming proportions as they descended into the infinitesimal world, until I found myself in a strange new field, in search of the entosthoblast of being—the nucleus of the nucleolus of life,

With a magnificent glass, having a power of near seven hundred diameters, which it is my good fortune to possess, I have been able to elicit many interesting facts; some of these pertaining to human spermatozoa, may not be wholly uninteresting to many of the profession, the more especially so, since the questions of excessive fécundity and sterility are so often forced upon us.

The ultimate forms of animate and inanimate organisms seem to merge so nearly into one as to need but the presence or absence of the same subtle agent to convert both into neither (original inorganic atoms) or vitalize the whole, to bestow at some future moment the distinctive elements that chain the germule to the animal or vegetable kingdom.

Certainly, the world of forms begin the monad. From the huge creations of the midæval age, the mammoth palm, and mastodons, to the veriest midge of the present day, all began being alike: at once a *cytoblast* and *cell-birth*, a *spermatozoa*.

The *pollen* of the plant, and the *semen* of the animal, may fecundate in the same mysterious manner; and at some future day we may be able to *see* a twin brother to our own spermatozoa in the fairy dust of flowers.

A very recent specimen of semen, when first placed under the glass, seemed a living but ill-defined mass of maggots, but which was soon resolved into a structure of something like cellular tela and columnar epithelium, floating in colorless *liquor seminis*, amid which sported multiplied thousands of very young *tad-poles*, or more exactly, *wiggle-tails*, like those of stale rainwater—*spermatozoa*. Embryo beings, eh? What becomes of them when they pierce the ovule, eh, again?

That they are individual vitalities, nothing is clearer. They possess all the requisites to constitute them such. They have distinct

forms; rest or move as they choose, and live or die independently. They travel in different directions—meet and pass each other. One will wriggle and lash his tail for hours on the same spot, while another drives past him with ease, making a journey at once, in about thirty seconds, across the entire field of the microscope—full the one thousandth part of an inch—a truly wonderful feat! They will show signs of consternation and alarm, and dodge from cell to cell like lizards hunting a place of safety. I have seen three and four packed in a single cellule the one-four thousandth part of an inch in diameter. Thrown into the vagina, they are said to travel universally in the direction of their destination, the uterus and ova; but on the glass-slide there is the utmost confusion, save among those on the outer edge of the film under examination, whose heads are turned nearly always toward the center of the mass, caught, as it dries up, running for deep water. Is that instinct, volition, or what? As the school-boy has it, for the present, we will call it "what."

They possess a body or head, neck and tail. The body or head is an elipsoid in shape, at one end of the longer axis of which is inserted the caudal filament through a ring or button that forms the neck. Their entire length will average about one-twelve hundredth part of an inch. The body is about one-tenth of this in length, and one-twelfth of it through the shorter axis; hence it is about one-twelve thousandth of an inch long, and less than one-fourteen thousandth of an inch thick. The neck is about one-twentieth of the body, and the tail with a thickness equal to about the one-one hundred and sixty-eight thousandth of an inch, has the wondrous length of one-twelve hundredth of an inch. These measurements vary much with the different physical conditions of the animalcule. While in the normal state, they have the life-like translucent fullness of very young fish; in dying, they shrink and blacken, presenting well-defined outlines. They show a clear spot in the center of the body, which, however, may not be owing to anything peculiar in their structure, but to a law of light.

Not all specimens of semen possess spermatozoa—some many, some few; and in some again they are dead: hence not all are capable of fecundating; for that power, beyond question, lies in and depends upon the vital spermatozoa. Healthy semen teems with them. In an average specimen, recently examined, I counted three hundred in the clear focal field of my glass, the one-ten thousandth part of a square inch.

This would yield the enormous number of three hundred millions in a cubic inch of the vital fluid.

It is not our province to settle the question of how many are required to vivify the ovule; suffice it to say, whether one or many, that by this great number a beneficent Creator has put the chances for procreation beyond a peradventure.

CONSERVATIVE SURGERY.

WAYNE GRISWOLD, M. D., CIRCLEVILLE, OHIO.

December 8th, 1868—Was called to see Miss W. While holding a chicken for her brother to kill, a misdirected blow of his hatchet cut off the end of her thumb, taking the entire nail, about one-third of the first phalanx and the entire ball of the thumb. On asking for the piece of thumb, they informed me that it was rolled up in a cloth out in a cold room, and that it had been one hour and three minutes (by the clock) since the accident. The mother was in great tribulation at the prospect of a deformed thumb for her young daughter, and the child was still more worried for fear she would not be able to play octaves on the piano. After washing the thumb in warm water till it bled freely, and warming the piece in the same manner, it was placed as near in position as possible and secured by adhesive straps. Left orders to wet the thumb (in a warm weak solution of carbolic acid in water) every few hours.

On the third day, removed the dressing. The parts adhered, but the nail looked blue and the skin white and dead. Dressing continued.

On sixth day, removed the dead skin and with it the phalangel bone. The ball of the thumb looked like a piece of fresh beef covered with purulent matter. Found by examining with a glass, a new nail starting. Continued the carbolic acid dressing.

The old nail came off in fifteen days; a new one took its place, leaving the thumb perfectly natural except a little flatness of ball from loss of blood. There is not a scar to mark the place where the thumb was injured. New skin formed from the stump up over the ball, smooth as it ever was. The mother was left to rejoice that her daughter had no thumb deformity and was again able to play the piano as well as she did before the injury.

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MYXOMA, OR HYPERPLASIA OF THE VILLI OF THE CHORION.

BY ALEXANDER D. SINCLAIR, M. D.

Member Massachusetts Medical Society, American Medical Association, Obstetrical Society of Boston, &c. Re-printed from Vol. 1, No. 1, of the publications of the Massachusetts Medical Association.

A little *brochure* of three pages, on a very old subject, with a very new name. The first page relates to the rarity of the affection; the second, the history of the case; and the third and last describes the remarkable phenomena.

"Mrs. ———, æt. forty, mother of seven living children, youngest about four years old, aborted after her first and fifth conceptions, about the third month. * * * Catamenia regular with some pain, were last present on January 27th, 1868." Pregnancy, "May 10th, she noticed for the first time her linen slightly stained with a somewhat bloody matter, which appeared at intervals for the next four days, with a slight pain occasionally felt in the uterine region.

Near midnight, on May 14th, "she was suddenly seized with an alarming hæmorrhage, causing her to faint and become pale as if dead. She had recovered her senses before I arrived, but the pallor which remained, together with the appearance of the bed on which she lay, bore evidence of a frightful loss of blood.

"On examination, the uterus felt like that of a woman in the fifth month of pregnancy. The os rigid, though sufficiently dilated to admit the index finger; hæmorrhage had ceased. Careful examination of the clots discovered only a small fœtus, having the appearance of full three months growth."

A tanpon was introduced and ergot administered, restoratives, &c.

"This dilated the cervix and excited uterine contractions, expelling large quantities of bloody fluid, *and opaque, flattened, flesh-colored bodies, irregular in size and form, many of which looked like pieces of decidua, generally longer than they were wide, and measuring about three to ten or twelve inches in length; others consisted of tuberosities strung together by more or less elongated and constricted portions. Many of these measured from two to five inches in length. All of these bodies were covered with a thin membrane (exoeborion), from which sprung numerous bud-like processes, varying from one to three lines in length.* No where did these growths present the vesicular

appearance which characterizes hydatidiform degeneration of the chorion villi, and when placed in a basin of water, they sunk to the bottom like pieces of flesh. * * * * The quantity of these bodies discharged would more than fill a quart measure."

We venture the presumption as a safe one, that these lines will scarcely attract the eye of any practitioner of any experience who has not encountered his similar case, and will not at once recognize it under its new title as a simple case of mole, and of the variety spoken of in the older obstetrical works as the mola carnosa. The history of the case, the symptoms, the character of the discharge, and above all, the microscopical results decide it as definitely as any collection of facts can.

"On microscopic examination of these bodies (which had been in alcohol for nearly twelve months), they were found to consist, essentially, of mucous tissue, or more literally, cells with here and there an indistinct fibrous appearance. Fatty metamorphosis had commenced in the tissue. The largest tuberosities contained masses of blood corpuscles and granular debris. No blood vessels were found, although searched for diligently."

What is a mole? So long ago as the time of Dubois and Velpeau, who wrote during the formation of the modern school of pathology, a mole was regarded as an "hypertrophy of the villosities of the chorion." (*Chaily Obst., p. 82.*) And although opinions have varied as to the primitive point of departure, *i. e.* whether in the decidua or the chorion, almost all agree that this hypertrophy constitutes the mole. (*Vide* resumé on the vesicular or cystic mole in its scientific and practical considerations, by Dr. Marcus Bloch, Freiburg, 1869. Schmidts Jahrbücher, August, 1869). Moles, organized fleshy masses. (*Montgomery on the Signs, &c., of Pregnancy, p. 213*). Moles, massa carnea (*Vogel*). Voigtel in describing the different species of mole, "in others," he observes, "the fœtus itself is destroyed, and only its membranes and the placenta continue to grow for a time and *get thickened and fleshy.*" For a good description of the mola carnosa, see *Lange's Geburtshülfe, p. 411.*

"When a placenta has been formed, many alterations may occur in its tissue in consequence of hypertrophy, inflammation or other morbid changes, &c. When thrown off, these diseased placenta present usually the appearance of a fleshy mass, being much thicker and more solid than the natural tissue, &c., and in some, there is a fatty degeneration." (*Hodge, p. 460.*)

Indeed, we scarcely entertain a doubt but that the gentleman himself entertains the opinion that the "remarkable condition" was a

mole attended with all the symptoms occurring, in the rule, as in this case. But we can not understand why the matter was regarded of such importance with all the literature we possess on the subject as to merit a re-print from the transactions.

Myxoma is a beautiful name and in accord with Virchow's anatomical classification of morbid growths. It means simply a tumor of mucous tissue, and was used before Virchow in describing this very condition, by Hildebrandt. In the resumé quoted above, occurs the following sentence: "Of particular interest is the occurrence of partial degeneration of the coty ledons, which have been observed both in the chorion and very often in the placentas of ripe fruits. (*Hildebrandt, Myxoma fibros, plac.,*) when the fœtus is generally found dead, badly or defectively developed."

"Myxoma occurs oftener as hyperplastic, more seldom as heteroplastic formations. To the first belongs especially the myxoma of the placenta (the so-called grape or vesicular mole), which consists in an hypertrophy of the mucous basis of the chorin villi *generally in the entire circumference of the membranes.*" (*Allgemein: Pathologie, Uhle & Wagner, p. 400*).

"Strapman found the decidua of a three months ovum thickened in places to three to four lines," and besides this general thickening, several perfectly smooth, somewhat flattened polypous excrescences, with broad bases. Besides these *mucous masses* were observed, likewise, other small polypi with pedicles, in commencement.

Virchow describes a similar case from a supposed syphilitic disease of the membranes, wherein the large *mucous masses* possess a smooth surface of a reddish color. He considers it a hyperplasia of the decidua (*Klob. p. 557–8.*) He, Virchow, believes also that the enlargement of the villi occurs outside of the cells, which may either persist or perish by fatty degeneration. The tissue is, besides, identical with that of the umbilical cord.

"It is among the tumors due to a proliferation of the mucous tissue that is among the myxomata that hydatidiform degenerations also are now ranged, and they are called myxoma of the villi of the chorion." (*Charpentier sur des Malad. du Placenta et des Membranes, p. 137*).

"The mucous tissue exists also in a high degreee in the tissue of the umbilical cord, which is called the gelatine of Wharton." (*Charpentier, loc. cit.*)

The most interesting case of mole, we may mention in passing, which we have ever encountered, is recorded in *Klob's Path. Anat. of the Female Sexual Organs, p. 529*, wherein an extra uterine pregnancy degenerated to a mole, while a mole also existed in utero, which proved fatal by hæmorrhage in the second month.

The case reported then, is simply a case of molar pregnancy with the usual termination, and occurring at the time (three months) when it is most likely to occur, because of the increased vascularity at the period of the placental formation, and from the fact that nearly twelve months elapsed between the accident and the report, the whole case bears the impress to us of a resurrection from its spiritual preservation and a re-imbodiment under the newer and more fashionable name.

The "most remarkable condition" is that of the accompanying plate, which consists of a number of irregular lines enclosing an open cavity, and which does not convey nearly as good an idea of the condition described as if the book had been suddenly closed on three or four unfortunate insects between. J. T. W.

REPORTS ON THE DISEASES OF CATTLE IN THE UNITED STATES, MADE TO THE COMMISSIONER OF AGRICULTURE, WITH ACCOMPANYING DOCUMENTS.

Washington: 1869. Pp. 190—8 vo.

The remarkable increase of disease among the domestic animals of the United States, in the last fifteen years, has attracted general attention, and the fact is of deeper interest because this prevalence of destructive plagues among these creatures has been attended by a signal exemption of the human family from all epidemic disorders. Except cholera, which spread over the continent in 1866, we have had no generally diffused disease since the fatal malady, called by the people cholera for want of a name more descriptive of its character, appeared about fifteen years ago among our hogs and the various families of poultry. What connection there is, if any, between these facts it would be unprofitable, in the present state of our knowledge, to inquire. But it can not be regarded as uninteresting that, at the time when man is enjoying the highest health, the animals associated with him are suffering from destructive diseases. It establishes at least this fact, that the causes of disease are not common to him and the lower animals. The "vengeful arrows" which destroy his "dogs and mules," are not those which fasten upon him, and the infection by which he is poisoned passes harmlessly over them.

This volume is devoted to the consideration of the diseases of cattle, which have only begun to excite interest in our country within the last few years. In the summer of 1868 an affection became general among the cattle brought to Cairo, Illinois, from Texas, and has been called, from its resemblance to a disease of the old Spanish cattle on the Gulf coast, "Spanish fever." It is more generally known by the name "Texas Cattle Disease." Professor Gamgee, of London, was requested by the Commissioner of Agriculture, Horace Capron, Esq., to make a full investigation of the complaint, and this work consists chiefly of his reports on the subject. The disease, according to Prof. Gamgee, is pleuro-pneumonia, and is propagated alone by contagion. The popular term murrain was applied, in times past, to all the fatal affections of cattle. This has been sometimes called "pulmonary murrain." It has been long known to veterinary surgeons, and much within the last century has been written concerning it in France, and especially in Germany. It has been eminently fatal in England and Ireland in the last twenty-seven years—two millions pounds sterling having been lost in cattle in those countries from the disorder during that period. From England and Holland the malady has been propagated far and wide. In 1843 it is said to have been imported into Brooklyn by a cow from Germany, and the disease is believed to have existed in the neighborhood ever since. From Holland the infection was imported into Massachusetts in 1859. Four cows arrived in a diseased state, of which three died in a short time, and the disease spread rapidly among the cattle on the farm of the importer. That the pleuro-pneumonia of cattle is propagated by contagion Prof. G. entertains no doubt; and to ignore the fact, he contends, will be to diffuse the fatal malady all over the whole country. Sick cows are sold to the butchers; often put into droves of other cattle, to which they impart the contagion, and in this way it is carried to all the marts where beef is sold, to become again centers of contagion.

Of the signs or symptoms of this disease, the first that elicits attention is a cough, and this Prof. Gamgee has found always attended by fever. In a herd of cattle he has frequently detected individuals apparently in perfect health, with a temperature of one hundred and four or one hundred and five degrees Fahr., and never in such a case did he fail to discover friction sounds and loud respiratory murmurs, the disease having been already set up in the lungs. The animal affected first attracts attention by the appearance of its coat, which is

dull and staring; its appetite soon fails, its breathing becomes quick, and it stands motionless with protruding head and arched back, which sufficiently indicate grave disease. Auscultation and percussion reveal a harsh rhoncus, with solidification of one or both lungs. Death, when it occurs, takes place from prostration, suffocation, purulent fever or hectic. The incubation stage of the disease may last eighty days, and usually averages from twenty-five to forty; the acute stage varies from seven to twenty-one days. The mortality varies from one to ninety per cent. of the animals affected. Even in mild outbreaks the mortality is seldom below twenty-five per cent. In England the usual cattle mortality has been more than double by the lung plague, and for many years, of the cattle that have died, fifty per cent. have fallen victims to this fever.

In regard to the contagiousness of the cattle plague, Professor G. remarks:

"The history of pleuro-pneumonia, coupled with the observations made on the supposed casual agencies capable of inducing the disease, are almost sufficient to establish the purely contagious nature of the disease; but there are several important proofs that deserve mention.

"It is seen in all countries where the lung plague appears, that it spreads in proportion to the opportunities of contagion. It is worst in large cities where cow-feeders have to make frequent purchases. It is apt to diminish in severity so long as the cows are confined to stables in the winter, and different herds have no chance of approach.

"The high-prized herds of England, which have been carefully isolated by their proprietors, have always remained free from the disease."

All the facts adduced on this head certainly make out a strong case in favor of the nature of the plague asserted in the following paragraphs:

"The lung plague is a malignant fever, never generated *de novo*, so far as reliable information has yet reached, dependent on the introduction of a virus or a contagion into the system of a healthy animal. This principle produces a local change if inserted into any part provided with a connective or fatty tissue, in which it most readily penetrates. The same local change is produced by its contact with the delicate mucous surface of the bronchial tubes.

"Viewed in this light, we have to classify bovine pleuro-pneumonia with the contagious fevers, and we must recognize that it is peculiar and different from the other known diseases of man or animals. The ordinary phenomena of inflammations are but superadded conditions, and an animal may have the disease without indicating their presence."

The medical treatment of this disease has not been satisfactory, and as to the treatment in general use, Prof. G. remarks that it is worse—useless. Bleeding was at one time extensively practiced, especially in England, but it is now almost entirely abandoned. The remedy to which Prof. G. attaches most importance, is iron in the form of the sisquichloride or sulphate, which he gives with the view of smothering the exudation into the lungs. A drachm mixed with coriander seed in bran, is freely eaten, and has, he thinks, often arrested the distemper. But it is evident from all that has been written on the subject, that a great deal is not to be expected from medical treatment in this complaint when once firmly established, and hence the greater importance of prophylatic measures by which it may be prevented from spreading. These consist in separating the healthy part of the herd at once from the diseased animals, and in inoculating those which have been exposed to the infection. Our author is fully persuaded of the efficacy of inoculation in securing at least a temporary immunity from the disease. He is not sure that a permanent security is given by the operation. At the same time that this exemption is secured, there is no danger of developing the plague by inoculation. The tip of the tail is the point most favorably chosen for inserting the virus, which is the fluid obtained from the lungs of an animal in the first stages of the disorder.

If the conclusions at which veterinarians have arrived in regard to the contagiousness of this disorder, and the practicability of avoiding it by inoculating healthy animals, should be sustained by future observation, the terrors of this plague will be substantially annihilated.

From this interesting report of Prof. Gamgee, it would appear that diseased cattle in great numbers had been slaughtered and sold by butchers in all countries where the lung-plague has prevailed, and it is a note-worthy fact that in no instance does disease in man seem to have originated from the use of such flesh.

Splenic fever is the subject of an elaborate report by Prof. Gamgee. The disease is not contagious. It is hardly amenable to treatment. Quarantine is the measure for preventing its dissemination.

These reports are highly interesting to agriculturalists engaged in raising cattle, and they are also instructive to the physician. We hope the investigations will be continued, and that important results will follow the efforts of government in this direction.

THE SCIENCE AND ART OF SURGERY: BEING A TREATISE ON SURGICAL INJURIES, DISEASES AND OPERATIONS.

BY JOHN ERIC ERICKSEN,

Senior Surgeon to University College Hospital, and Holmes Professor of Clinical Surgery in University College, London. From the fifth enlarged and carefully revised London edition. Illustrated with six hundred and thirty engravings on wood. With additions by JOHN ASHHURST, JR., A. M., M. D., Vice-President of the Philadelphia Pathological Society, Surgeon to the Episcopal Hospital, etc., etc. Philadelphia: Henry C. Lea. 1869. Pp. 1238, imperial octavo. Cloth, $7.50; leather, $8.50. From Robert Clarke & Co., 65 West Fourth street, Cincinnati, Ohio.

Among the various works issued frem the medical press of this country, during the present year, this edition of the "Science and Art of Surgery" stands pre-eminent both for its intrinsic value and its handsome appearance.

Through four editions the work is so well known to the profession that any extended notice of it here would be entirely superfluous; for we believe it to be generally admitted that no single work, either American or foreign, pertaining to the principles and practice of surgery, has been so universally received with favor as this of Professor Ericksen. For ourselves, we may be permitted to say, that for the last ten years we have been in the constant habit of referring to "Ericksen," when beset by doubts and difficulties in the managment of our surgical cases; and owing to the completeness of the work in details relating to the pathology, diagnosis and treatment of the affections falling within the domain of surgery, we have seldom failed of obtaining the information sought.

The fifth London edition, from which this is prepared, is in two volumes; but by greatly enlarging the page, the American publisher has presented the English edition complete in a single large though not unwieldly volume. The improvements in this edition, as clearly stated in the preface, are, "The whole work has been remodeled; many of the wood-cuts have been re-drawn, and nearly one hundred new ones added. Some chapters have been, in a great measure, re-written, and much new matter has been added beyond the mere general enlargement of the work. The additions thus made have not been confined to any one particular part, but have been widely and generally distributed through the various subjects of which the work treats;" and

in them are presented a notice of the more important recent advances in the science of surgery, and the results of the more extended experience of the author in the practice of its art.

The chapter devoted to ophthmalic surgery is written by Mr. Sheatfield, one of the ophthalmic surgeons to University College Hospital, and adds much to the value of the work. The chapter on syphilis has been re-arranged by Mr. Berkley Hill, surgeon to the Lock Hospital, London. And the subjects of general surgical diseases, including pyæma, scrofula, and tumors, have been revised by Dr. Alexander Bruce; while others have assisted in other branches.

The additions made to the work by Dr. Ashhurt are of especial interest, and consist mainly of such practical matters as have been omitted by the author in relation to American surgery; and we believe the general verdict will be that the American editor has performed his work, both as a text-book for the student and as a work of reference for the practitioner, at the same time we observe several instances in which we think a brief notice of the statistics collected by American surgeons, in relation to certain operations and accidents might have been inserted with advantage.

A well arranged table of contents and a copious index render the work convenient as one of reference. In the way of paper, printing and binding, the work is superb. J. R. W.

A MANUAL OF ELEMENTARY CHEMISTRY—THEORETICAL AND PRACTICAL.

BY GEO. FOWNS, F. R. S.,

Late Professor of Practical Chemistry in University College, London. Edited by Robt. Bridges, M. D., Professor in the Philadelphia College of Pharmacy. Published by Henry C. Lea, Philadelphia, 1869. For sale by Robt. Clarke & Co., Cincinnati.

The publishers have given us this re-print from the tenth revised and corrected English edition; the notes, together with a number of illustrations having been added by the American editor. Fownes' chemistry has long enjoyed the favor of students, more especially of those directing their attention to the science of medicine, and this edition, fairly representing, as it does, the present condition of the science, will, we are sure, continue to hold the favor it has so long enjoyed.

It is the text-book recommended by many, if not most of our medical lecturers, and a more complete expose of the subject can not be found in any work of its size. About one-half of the work is devoted to organic chemistry, the greater part of which has been re-written and those additions made which have been rendered necessary by recent investigations and discoveries. The latter part, about forty pages, is devoted to animal chemistry; this has been entirely revised. The work is substantially bound, printed on good paper, in small but clear type, embracing much information in a compact and convenient form for use. We know of no work on the subject more deserving of a place in the library of either practitioner or student of medicine. A. W. P.

BIOGRAPHY.

A BIOGRAPHICAL SKETCH OF DR. B. F. SHUMARD.

BY LUNSFORD P. YANDELL, M. D.

The subject of the following memoir was known as a man of science wherever Geology is cultivated; and it is in this character that his name commands the highest respect of men. But he was also a physician of note, and at the time of his death was pursuing his profession successfully as a teacher and a practitioner in one of the leading cities of our country. His professional life presents some points of unusual interest. It affords an instance of the attainment of distinction in two pursuits foreign from each other—both demanding much time and severe mental application; and the rarer example of success in the practice of physic, after having deserted it through a number of years for another profession. The many friends attached to him by his social virtues and scientific attainments, have a right to expect some enduring record of his useful and honorable life; and it is with the view of meeting to some extent this just expectation, as well as to satisfy the claims of friendship that this memorial is written.

Dr. Benjamin Franklin Shumard was born in Lancaster, Pennsylvania, on the 24th of November, 1820, of pious and respectable parents.

His father, Mr. John Shumard, was a descendant of the Huguenots, and received in his youth careful mental and moral training. Evincing decided piety when young, he was educated for the ministry in the Methodist Episcopal church. The day had been appointed for his ordination, when he suddenly declared his intention to quit divinity and engage in some business by which money might be made. His friends remonstrated against his change of purpose in vain. He was of a somewhat stubborn temper, and it is possible that they were not entirely judicious in the manner of opposing his determination. An old, gray haired minister, to whom he was greatly attached, expostulated with him feelingly against his course, and finding him immovable, closed his argument with the prediction, that "though he might make money, he would never be rich"—a prediction which was literally fulfilled. About a year after this event he married Miss Ann Catherine Getz, of Lancaster. He had become a merchant, and was in prosperous business. His prospects at the time of his marriage were encouraging, but he grew restless, and in changing from place to place in a few years wasted not only his own means, but the little patrimony of his wife. He was industrious, punctual, energetic, but the desire of change operated as a bar to success notwithstanding his good moral and business habits. But amid all his failures as a merchant, he never lost sight of the interests of his family; and, although generally straightened in his circumstances, he found means to keep his children at school. Two of his sons received a professional education. He was careful about the moral training of his children, and, always truthful himself, impressed upon them early the sacred duty of adhering at all times strictly to the truth. At one period of his life his misfortunes rendered him almost desperate, and it was feared that he would become a slave to the vice by which so many men, under the pressure of pecuniary disasters, are ruined. But his strong will, his early religious principles, and the salutary influence of a judicious wife and devoted sons prevailed, and he died in the communion of the church in which he was reared, cheered in his declining years by seeing his children prosperous in life, and two of his sons rising to distinction.

The father of Mrs. Shumard, Mr. Peter Getz, was a man of decided talents. He was an inventor, of a mechanical genius, and had great fondness for general science. He entered the navy as midshipman, in 1812, at the opening of our last war with England, and was with Lawrence at the battle of the Hornet and the Peacock. After a short

service he left the navy, and was appointed a lieutenant in the army, in which capacity he served to the close of the war. He was successively, at different periods, a publisher, an editor, a bookseller, and an author, and when he died was mayor of the city of Reading. He claimed to have invented the first fire-engine used in America. At one time he was connected with the general Government as inspector of arms, and in some official capacity made two or three voyages to Europe in the service of the war department. His daughter inherited his taste for letters, which he took pains to cultivate, and this, conjoined with a sound judgment, deep piety and a natural sweetness of disposition, rendered her one of the most valuable of mothers. Mr. Getz merits the consideration of American physicians as the early patron and friend of Dr. John Eberle, so long esteemed one of the ornaments of our profession. Mr. Eberle, who lived in the same town with him, had not the means to improve his son's mind as he wished. Mr. Getz was impressed with the taste for study and aptitude to learn displayed by young Eberle, and not only encouraged his father to send him to school, but assisted him with the means of giving him a thorough education. He was not spared to see his young townsman reach the eminence which he ultimately attained as a teacher and author, but he lived long enough to see him rising into the highest rank as a practitioner in Philadelphia.

In 1835 the father of Dr. Shumard removed to Cincinnati, and he was placed soon afterwards at Miami University, in Oxford, Ohio, where he remained three years. Here, as always before when at school, he made good use of his time. He was a diligent student, and acquired accurate knowledge of the branches of study to which he applied himself. His father removed to Philadelphia before he was ready to take the degree of A. B., and he was sent two years afterwards to attend a course of lectures in the Jefferson Medical College. After one winter in that institution, his father removing to Louisville, he became the private pupil of Prof. Gross, and entered the Medical Institute of Louisville in 1841. At the end of his second course in the Institute he received his doctor's degree, to which he had fully entitled himself by years of diligent study. In a large graduating class, it is safe to say, that not a student excelled him in the extent or accuracy of his attainments.

That stage of his career was now reached the most anxious in the life of a young professional man, when he had to select a home and set up in his profession for himself. The world was all before him

where to choose, and he knew that it was entirely upon his own efforts that he had henceforth to rely for the means to make himself comfortable and independent in the world. Something led him to fix upon Hodgenville, a small town in Kentucky, south of Louisville, as his place of abode; and here, a few months after he received his degree, he opened an office and modestly tendered his professional services to the great public.

The novitiate, proverbially trying to the patience of young professional men, was, in the case of Dr. Shumard, more than usually tedious and discouraging. With his manners and tastes it is doubtful whether he would have commanded early success any where. His habits were those of a scholar brought up in a city, and all his tastes inclined him to the cultivation of science rather than the acquaintance of men. The people among whom he settled, though intelligent and capable of appreciating professional merit, had been accustomed to look for sociability in those who sought their favor. Besides a native modesty which made Dr. Shumard retiring, the love of natural history had become with him a passion, and this tended constantly to draw him away from society and from his office. Instead of seeking practice, he spent a good share of his time in the woods and fields exploring the geological formations of his neighborhood, and making collections of objects of natural science. The people had no just conception of the dignity of such employment. They could not understand him. He was looked upon generally as eccentric, and by many, perhaps, as not in his right mind. It was evident to all that, at the least, his heart was not in his profession, and very naturally but few were disposed to seek his services as a physician. He made many friends in Hodgenville, of all in fact who were brought in contact with him, and was greatly esteemed, especially by his professional brethren, for his high cultivation of mind, his refinement of taste and manners, and his amiable character; but his progress as a practitioner was so slow that in less than a year he determined to quit the country and return to Louisville. This step was extremely disheartening to his father, who had experienced in his own case the evils of instability, and was by no means pleased at the display of so decided a taste for natural science in his son. On the return of the young doctor to his house he remarked to a friend, that he "was afraid Benjamin had so many rocks in his head that there was no room left in it for medicine." Mrs. Shumard, it is interesting to remark, was more hopeful in regard to her son. She was not displeased by his devotion to geological studies

but encouraged him to attempt to win a name as a cultivator of the science.

In the late Prof. Cobb, Dr. Shumard met a congenial spirit, a friend who appreciated his fine powers of mind and sympathised in his love of the study of nature, and who, as a professional anatomist, was qualified to assist him in analyzing the structure of the by-gone races of animals that once tenanted our globe. Together they explored all the localities so rich in organic remains in the neighborhood of Louisville, and made collections of their fossils. In this way Dr. Shumard was diverted more and more from his profession, and yet there were indications of growth in his business, which showed that he might succeed as a practitioner if he would devote himself to practice.

In the summer of 1846, M. Edward de Verneuil, President of the Geological Society of France, in the course of a tour to determine the parallelism of the palæozoic formations of North America with those of Europe, visted Louisville, and in those researches was materially aided by the knowledge of Dr. Shumard, who had made the geology of Kentucky a special study. That eminent geologist expressed the greatest delight at finding in the Louisville collections fossils so analogous to many in his own cabinet at home as to fix beyond doubt the equivalency of the corresponding deposits; and as a token of his regard for the young geologist of Kentucky, and of his appreciation of the services which he had rendered to science, presented him with a copy of his splendid work on the Palæontology of Russia. Dr. David Dale Owen was in Louisville at the same time, and like M. de Verneuil, was struck with Dr. Shumard's attainments, and the energy and zeal with which he was prosecuting geological science. Having on hand the geological survey of the north-western Territories, under the direction of Congress, he appointed Dr. Shumard a few months afterwards one of his assistants in that great work.

The large volumes, issued successively by Congress, containing reports on the geology of Iowa, Wisconsin and Minnesota, rank among the great scientfic productions of our country; and the contributions by Dr. Shumard impart to them a large share of their value. During the winter of 1846–7, he worked with Dr. Owen in his laboratory, at New Harmony, analysing minerals and soils, and preparing his report for the press. In the spring of 1847, before taking the field again, he prepared, in conjunction with the writer, a paper which appeared in the October number of the *Western Journal of Medicine and Surgery*, under the title of "Contributions to the Geology of Kentucky."

This memoir, which, it is but just to say, owes its chief scientific interest to his pen, attracted unusual attention at home and abroad, and was complimented by many European geologists. It was pronounced by the best critics a real contribution to geological science, and is still referred to by all writers who have occasion to notice the organic remains of Kentucky. Its claims to the consideration of medical men rest upon the connection which is shown in it to exist between certain geological formations and particular diseases.

He continued to labor in the survey of the Territories, under the government of the United States, until 1850, when he made a voyage to Oregon with Dr. John Evans, for the purpose of making a geological reconnoissance of that Territory. The work occupied him eighteen months, and the palæontological report of the survey was written by him. He returned to Louisville in 1852; and on the 18th of November, in that year, married Miss E. M. Allen, a lady whose love of science, domestic virtues and fine literary accomplishments heightened the usefulness as well as the charm of his subsequent life. For nearly a year after his return from Oregon, he was employed on the palæontology of the Red River Exploration, which had just been completed by his brother, the late Dr. George G. Shumard, in connection with Capt. R. B. Marcy. He was equally at home in the field making surveys and determining the relative ages of formations, and in his study writing reports and authenticating the genera and species of fossils; and his powers of observation, his patience and accuracy rendered his researches eminently trustworthy. His communications bore unmistakable evidence of learning and fidelity, and were always accepted as from the hand of a master.

In 1853 he was invited by Prof Swallow to take the position of Assistant Geologist and Palæontologist in the Missouri Geological Survey, and that year removed to St. Louis. It was in a subordinate station still that he was destined to exert his great faculties and employ the large stores of his knowledge. From the time of his first employment on a geological survey, he was qualified for the foremost position; but though his qualifications were recognized by men of science everywhere, they had been hitherto overlooked by those who held the power of appointing to office. As assistant he labored five years in the geological survey of Missouri, when, at last, he received an appointment worthy of his reputation. In 1858 he was invited by Governor Runnels, of Texas, to make a geological survey of that State. The compliment was hardly more gratifying to Dr. Shumard than to his

friends, who had become impatient at seeing him so long kept in the back ground. They felt that now, for the first time, he was in a situation to receive full credit for his labors.

He entered upon the great work with enthusiasm and in the expectation of being able to prosecute it to its completion. For two years he pursued it industriously, and had progressed so far in it as to make a reconnoissance of almost the entire eastern and middle portions of the State; and the specimens collected during the survey were arranged preparatory to writing his report, when Gen. Houston, who had just been elected Governor, removed him from office to make room for one of his political supporters. In the course of his exploration, Dr. Shumard had made interesting discoveries. The geological deposits of Texas were ascertained to be the most complete of any series elsewhere known on the continent of North America, ranging from the most ancient strata up to the latest tertiary formations. If the survey had been completed, there can not be a doubt that it would have presented results of immense value to the State, and of great interest to the scientific world. As it is, Dr. Shumard indicated the wealth of the field which remains to be developed by future explorers. His friends had great hopes that he might be recalled to the work, and there is reason to believe that he would have been reinstated in office if the survey had gone on. But a short time after its interruption the war unfortunately broke out and put an end to geological surveys in our country for the time. He returned with his family to St. Louis, but still indulging hopes that he should soon be able to resume his geological labors. He could not persuade himself that war would be waged between the States; but as it went on, month after month, he at last turned reluctantly away from his darling schemes. Geology no longer promised him employment, and he was compelled to return to medicine for the means of supporting his young family. It was in March, 1861, that he removed to St. Louis from Austin, and after waiting for a few months in vain for the return of peace, he opened an office.

"For two or three years," says a friend in a letter written to me since his death, "it was a pretty hard struggle with him, but success at last crowned his efforts. He was always the industrious, hard-working student you knew him years ago, with the same determination to succeed. Few persons seemed to suspect that under his suavity of manner and gentleness of character he bore so strong a will. If he determined to do a thing, it was done in spite of all opposition.

Having once decided in his own mind that a principle was correct, he adhered to it at all hazards."

In a letter to me, written some time after the close of the war, referring to the same matter, he said: "You have learned that I have, in a measure, abandoned geology; and, much to your surprise, no doubt, resumed the practice of physic, after being out of the profession well nigh fifteen years. I was driven to it at the commencement of the war, as geology was then pretty well 'played out.' I had to practice medicine or starve, and of course did not hesitate long which alternative to choose. I have been eminently successful in the end, and my practice is becoming quite lucrative. The strangest part of the matter is that I have become almost as much in love with medicine as I once was with geology."

He was elected Professor of Obstetrics in the University of Missouri in the autumn of 1866, and lectured acceptably in that school two winters. "My professorship," he remarked in the letter referred to, "yields me something, and I am rather fond of lecturing." Before the beginning of another term he had a hemorrhage of the lungs, which proved to be the precursor of phthisis. He was in too enfeebled a condition to attempt to lecture, as he had hoped to do, and was obliged to have the course delivered by a medical friend. His health had been evidently declining for several months, but he attributed his failing strength to bronchitis. From the middle of January last until he died he declined rapidly, and in March, by the advice of his medical attendant, left home to try the effects of a milder climate. He took passage on the ill-fated steamer Ruth, for New Orleans. The boat was burned on the Mississippi above Vicksburg, and he suffered much from the excitement and from exposure to cold. An attack of pneumonia was the consequence. He returned immediately home, and died in the bosom of his family on the 14th of April, in the forty-ninth year of his age.

At the time of Dr. Shumard's death, he was President of the St. Louis Academy of Science. He was also a corresponding member of the Geological Society of London, of the Geological Society of France, of the Imperial Geological Society of Vienna, of the Imperial Geological Society of Hermstadt, of the Academies of Science of Philadelphia, California, Cincinnati, New Orleans, and of many others. By all the Societies at home his death was noticed at the time, and resolutions were passed honorable to his memory. It was declared in one of those adopted in the Academy of Science of St. Louis, "that

the Academy has been deprived of an ornament of which it has no equal, and of a leader and fellow-laborer that it can scarcely hope to replace; that his name has been an honor to us for which no distinction that we have been able to confer upon him could be deemed an equivalent." By a member of the St Louis Medical Society it was justly remarked that few men of his age in our country, "had received so many and such honorable testimonials of their scientific acquirements, and yet so marked was his modesty that few, even among his most intimate friends, knew how highly he had been honored."

Few writers more industrious than Dr. Shumard have appeared among the geologists of our country. In the Transactions of one scientific body alone, the Academy of Science of St. Louis, he published, in eleven years, the following papers:

1. Description of New Fossil Crinoidea, from the Palæozoic Rocks of the Western and Southern portions of the United States.
2. Discovery of the Permian Formation in New Mexico.
3. Description of New Fossils from the Tertiary Formation of Oregon and Washington Territories, and the Cretaceous formation of Vancouver's Island, collected by Dr. Evans.
4. Descriptions of New Species of Blastoidea, from the Plæozoic Rocks of the Western States, with some Observations on the Structure of the Summit of the Genus Pentremites.
5. Table of Genera and Species of the Family of Blastoidea, found in the Western and Southern portions of the United States.
6. Notice of New Fossils from the Permian Strata of New Mexico and Texas, Collected by Dr. G. G. Shumard.
7. Notice of Fossils from the Permian Strata of Texas and New Mexico, obtained by the United States Expedition under Capt. John Pope for boring Artesian Wells, with Descriptions of New Species from those Strata and the Coal Measures of that Region.
8. Observations on the Geology of St. Genevieve: being an Extract from the Report made to the Missouri Geological Survey in 1859.
9. Observations upon the Cretaceous Strata of Texas.
10. Descriptions of New Cretaceous Fossils from Texas.
11. Notice of Meteoric Iron from Texas.
12. Descriptions of a few New Species of Gasteropoda from the Coal Measures, and a Brachiopod from the Potsdam Sandstone of Texas.
13. New Fossils from the Primordial Zone of Wisconsin and Missouri.
14. Descriptions of New Palæozoic Fossils.
15. Dicotyledonous Leaves in Cretaceous Strata of Texas.
16. Vertical Section of Silurian Strata.
17. Sketch of the Life and Scientific Labors of Dr. John Evans.
18. Notice of a (supposed) Meteorite.
19. On Oil Springs in Missouri.

20. A Chronological List of Works on the Palæozoic Echinodermata of North America.

Catalogue of North American Palæozoic Echinodermata.

Table of Genera and Species of Echinodermata in the Geological Formations of North America.

Before entering upon this series of publications, and in addition to the other memoirs already noticed, he had published in conjunction with Prof. D. D. Owen, in the *Journal of the Academy of Natural Science*, of Philadelphia, in 1850, a description of fifteen new Species of Crinoidea from the Subcarboniferous Limestone of Iowa, collected during the United States' Geological Survey of Iowa, Wisconsin and Minnesota, in the years 1848 and 1849.

In the same journal he published the following year, a description, with Prof. Owen, of Seven New Species of Crinoidea from the Subcarboniferous Limestone of Iowa and Illinois. Conjointly with the same author, he wrote a Report on the Number and Distribution of Fossil Species in the Palæozoic Rocks of Iowa, Wisconsin and Minnesota, which was read before the American Association for the Advancement of Science, at its Fifth annual meeting, and published in the Proceedings of 1851. In 1852 he contributed to the Report of the Exploration of the Red River in Louisiana, under the direction of Captains R. B. Marcy and Geo. B. McClellan. In the same year, conjointly with Prof. Owen, he published in the Report of the Geological Survey of Iowa, Wisconsin and Minnesota, Descriptions of One New Genus, and Twenty-two New Species of Crinoidea from the Subcarboniferous Limestone of Iowa. In 1855 he contributed to the Second Annual Report of the Geological Survey of Missouri, a Description of New Species of Organic Remains. The year succeeding there appeared in the Proceedings of the Academy of Natural Sciences of Philadelphia, a notice by him of a New Fossil Genus, belonging to the Family Blastoidea, from the Devonian Strata, near Louisville, Kentucky.

He had now acquired such fame as a practical geologist, that his services were frequently sought for by companies and private individuals owning mineral lands, and he made numerous surveys, of which the reports show his sound judgment as well as his varied scientific attainments. Among these is a report, which appeared in 1865, on the Mineral Lands of Missouri, owned by H. W. Woodruff, Esq.; one, published in 1867, on the Enloe Mining Property of Allen P. Richardson, Esq., in Crawford county, Mo.; a second, issued the same year, on the Mineral Lands belonging to R. H. Melton, Esq., in Benton and Hickory

counties, Mo.; and a third on the Old Mines Property of William Long, Esq., which was also published in 1867,

These last reports were prepared after he had resumed the practice of physic, and in the midst of laborious professional duties. He had learned so well how to utilize those intervals of leisure which occur almost daily in the practice of the busiest physicians, that he was able to write these elaborate papers without seriously missing the time consumed in their preparation. Many of his memoirs are long and involved a vast amount of labor and research. Each one was a substantial contribution to the science of his country. He was an acute as well as patient observer, and with his activity in the field, and his quick eye to detect any variety in the form or structure of objects around him, it may be doubted whether he ever passed a week while devoting himself actively to geological pursuits without discovering a new species among the extinct organisms imbedded in our rocks, or some fact in their anatomy of interest to palæontologists. His labors have attracted the attention of geologists in all countries. The high estimation in which they are held is attested by the constant references to them in all the late works that relate to the geology of North America. Of these almost all make mention of some of his numerous publications. By nearly every writer who has described any of the fossil families belonging to our ancient deposits, his name has been connected with a new species. It would be tedious to enumerate the shells, corals and crinoids that bear the name of Shumard, which thus will be rendered familiar to the future students of palæontology, and show to coming ages how high was the regard cherished for him by contemporary men of science.

I could hardly trust myself if in this sketch I had felt called upon to write a eulogy on Dr. Shumard; nor shall I here attempt any elaborate analysis of his character. Enough, perhaps, has been written to afford the reader, if a stranger to him, some just idea of his moral worth, as well as of the versatility of his talents, his energy, industry, and profound attainments. He was distinguished for those qualities of mind and temper that seem almost always to be found in the true Naturalist—simplicity of manners, modesty, gentleness, refinement of taste, enthusiasm, and an ardent love of nature. When to these are added high intellectual endowments, refined and exalted by mental and religious training, unselfishness, and perfect moral integrity, we have presented to us a character the most pleasing to be met with in all the walks of society. And such, I am sure, would be the testimony of all who knew

him, was the subject of this memoir. Among the many good and true men with whom it has been my privilege to be intimately associated in life, no name revives in my mind recollections more agreeable than his; hardly one recalls a disposition so artless, gentle, genial, amiable, or a character so faultless. It is doubtful whether he has left an enemy behind him in the world or ever made one in his life. Having been first diverted from medicine by his love of geology, and then been forced to resume the practice of physic as a means of making a living, he proved his ability to excel in both professions; for he had already become popular as a physician, and was gaining reputation as a teacher when overtaken by his untimely disease. To those scientific acquisitions which raised him to such distinction, he was most fortunate in adding that which Sir Humphrey Davy, in his last moments, declared to be, in his estimation, the most deservable of all human possessions—a firm religious faith. This, which shaped and regulated his early life and gave symmetry to his character in manhood, sustained him when sickness came to arrest him in his mid-career and cast a shadow over all his earthly prospects. He bore up cheerfully under his wasting disease, and labored on at his profession and upon his geological reports until too feeble to work any longer, glowing to the last with the love of science and the domestic affections.

Dr. Shumard was a member of the Sixteenth Street Presbyterian Church, in St. Louis, the gifted pastor of which, Dr. James H. Brooks, had been for many years his warm personal friend. He leaves a wife and two daughters, one nine and the other four years old. His remains rest in the Bellefontaine Cemetery.

DEATH AND BURIAL OF DR. WILLIAM C. WILLARD.

PROCEEDINGS OF THE DELAWARE COUNTY MEDICAL SOCIETY.

The Society held a special meeting pursuant to call of the President. Besides the regular members present, there were in attendance also, by general invitation to medical men, Dr. Samuel P. Anthony, a retired practitioner and the oldest physician in Delaware county, and Dr. J. A. Compton, a homœopathist.

The President called the meeting to order. He then arose, and read the following address:

GENTLEMEN OF THE SOCIETY: We are now assembled for the solemn purpose of considering the death of a fellow member, and in order that we may go hence in a body to attend his funeral. With our own hands we will bear his remains to their final resting place.

Vir probus medendi peritus—an honest man skilled in medicine! This is the definition which Bouillaud gave of a true physician, and this is the full measure of praise which *justice*, as well as custom, requires that we should accord to the memory of William C. Willard. For seven years I have been acquainted with that noble man, and if under oath I were required to write his epitaph, I would do it briefly in the words *Gulielmus Chapin Willard vir probus medendi peritus*. But here are members of the profession who have known our departed brother—not for seven, but for more than thirty years. Can they not confirm my testimony as to his godly honesty and superior medical skill? *Vir probus medendi peritus* is *their* response: and from all this society, and, I doubt not, from this whole community, as from one man, will be echoed the words, *an honest man skilled in medicine.*

William C Willard entered the junior class of Dartmouth College in 1827, at the age of seventeen years, in 1831, he received from that institution the degree of Bachelor of Arts. His name was thus early enrolled with some of the most honorable in the land. The great statesman, Daniel Webster, and the great surgeon, Reuben D. Mussey, were then two of the many distinguished alumni of the famous old college at Hanover.

But not long after the completion of his preliminary education, at the age of twenty-one years, he began the study of medicine. Mussey, then professor of anatomy and physiology in the Medical Schools of Dartmouth, was his first preceptor. Under the private and public tutorage of this great surgeon and good man young Willard continued two years, and during that time attended also several courses of lectures delivered by the professors in the "Medical House" at Hanover. Here, no doubt, he gave special attention to the sciences of which his private preceptor was the public teacher, and here laid the foundation of his excellent medical education.

The young doctor now left Hanover, and returned to Charleston, the village of his birth. Here he immediately became the pupil, and entered the office of Dr. Samuel Webber, a practitioner "remarkable," as I am informed, "for his superior skill in the diagnosis and prognosis of diseases." "*He is a great physician*," says Bigelow, "*who above other men understands diagnosis.*" In this we all concur; and I may therefore

venture to say that Dr. Willard's last preceptor was a great physician, even as his first was a great surgeon. With Webber the Doctor remained three years. He then came westward, and in 1836 located in the village of Muncietown, now the city of Muncie. Here he continued to sojourn till Saturday last, when death suddenly introduced him to a higher life.

Dr. William C. Willard never labored for a fortune, but with only a competency he seemed content. He practiced medicine, "not as a trade," to be pursued solely for the purpose of amassing wealth, but as a noble profession, to be followed more especially for the good it might confer on others—for the preservation of health and the cure of disease. Notwithstanding he was for many years engaged in extensive and laborious practice, he has nevertheless died a poor man. Great indeed must have been the elemosynary services which Dr. Willard rendered in this community! But now he has gone to the great and glorious reward of a true physician—the vast incorruptible treasures which he laid up for himself in Heaven.

The committee on resolutions, previously appointed by the President, consisting of Drs. Helm, Winton, Kemper and Andrews, was now called upon to report, and through the Secretary, presented the following:

WHEREAS, It has pleased Almight God to remove from among us Dr. William C. Willard, an old and honorable member of our profession; Therefore,

Resolved, That by the death of Dr. William C. Willard, the profession has lost a member whose skill and experience entitled him to our regard and respect, whose uniform kindness and courtesy commanded our affection, and whose honesty and integrity as a pyhsician gave him a desirably high rank in his profession.

Resolved, That in the death of Dr. Willard society has lost a useful citizen, and his family a kind and affectionate husband and father.

Resolved, That we deeply sympathize with the family and friends of the deceased in their distressing bereavement, that we tender them our sincere and unaffected condolence, and commend them to the Allwise Creator, who is ever ready to soothe the bereaved heart.

Resolved, That a copy of these resolutions be furnished the family of the deceased, The Muncie *Times*, *Western Journal of Medicine* and Cincinnati *Lancet and Observer*.

The report of the committe was unanimously adopted, and therefore, on motion, the Society adjourned, to reassemble at the late residence of Dr. Willard, and to bear his body to the grave.

HENRY C. WINANS, *President*.

W. J. ANDREWS, *Secretary*.

MUNCIE, NOVEMBR 9, 1969.

CORRESPONDENCE.

PHILADELPHIA, NOVEMBER 15, 1869.

The fall sessions of the preliminary courses of the Jefferson Medical College and of the University, have been completed, and the regular winter sessions have commenced.

The introductory lectures were delivered at each institution on the 12th ult., and as usual on these occasions, large audiences of graduates and under-graduates were assembled to hear the discourses delivered by the respective lecturers. These inaugural orations assume a good deal of importance, and are subjects of some concern to the officers of the institutions, by reason of the fact that the candidate for medical instruction frequently postpones a choice of schools until his arrival in the city, when he desires to inform himself, by an inspection of the museums, the anatomical amphitheatres, the lecture rooms, the hospitals, and by a glance at the *personnel* of the learned professors, of their respective advantages. After this careful examination, he awaits the delivery of the introductory address, which, not unfrequently, confirms the impressions already formed, and the important question is decided.

Prof. Joseph Pancoast, of the Jefferson Medical College, and Prof. R. E. Rogers, of the University, made the addresses of welcome this year, and the well-known reputation of each of these gentlemen, as graceful writers and polished speakers, attracted larger audiences than usual.

Notwithstanding the general re-opening of the Southern schools, and the inauguration of new ones in the West and South-west, the number of students in attendance has not declined, but, as we are informed, has increased, so that the classes are larger than they have been at any time since the war. In one (the Jefferson) the class numbers four hundred, and contains a large proportion of Southern and Western students. This would seem to indicate that our city still maintains its time-honored reputation as the center of medical instruction in our country, to which students are attracted from all parts, despite the active competition existing on all sides.

Dr. John H. Brinton, Lecturer on Operative Surgery in the summer school of the Jefferson Medical College, holds this year the Mütler Lectureship on Surgical Pathology at the College of Physicians, and is now delivering before the College a very interesting and instructive course of lectures on the subject of Gunshot Injuries. During the late war Dr. B. occupied the position of surgeon of volunteers, and was attached, during the greater portion of the time, to the staff of the General commanding the armies. His experience in the field was, therefore, ample, and enables him to speak with authority upon the subject of gunshot injuries and their effects on the soldier performing duty in the different parts of the country. At the close of the war he was assigned to duty as officer in charge of the army anatomical museum at Washington, where he enjoyed increased facilities for the examination of specimens illustrating the effects of gunshot lesions. The following synopsis of the course will furnish some idea of the way in which the subject is treated.:

Fire Arms and Projectiles—Theory of Fire—General Phenomena attendant upon Ball-Wounds—Death—Ratios of Casualties in Battle—Local Effects of Ball-Wounds—General Prognosis—Gunshot Injuries of Bones—Gunshot Injuries of Joints—Gunshot Injuries of Chest.

Under the head of Fire-Arms and Projectiles, he gave an interesting account of the invention and use of arms and projectiles, ancient and modern—the improvements made in their construction up to the present day, and the kinds employed during the late war. He proved, by reference to official documents and by his own experience, that the *explosive* bullet was but rarely used, and then not for the purpose, as frequently averred, of disabling troops, but rather with the design of exploding caissons and destroying ordnance stores: the fragments so frequently found in wounds, and designated as portions of the explosive ball by surgeons, were, in truth, parts belonging to the English conoidal bullets which were principally used by the Southern troops.

The circumstances modifying General Prognosis he illustrated by reference to campaigns—that of General Grant up the Cumberland and Tennessee rivers, afforded him a typical illustration of the combined influence of three causes modifying in a marked manner the general prognosis. Rendezvousing in the autumn at Cairo, the troops became saturated with malarial poison—at the seige of Fort Donaldson, deprived, by the exigencies of the service, of fresh meat and vegetables, scorbutus made its appearance. Transferred from Fort Donaldson up

the Tennessee river in crowded transports to Pittsburgh Landing, ochlesis was developed. Thus, the prognosis in cases of wounds received at this period, was extremely unfavorable, and was distinctly modified by the combined influence of the caoses alluded to. Numerous drawings and diagrams, varieties of arms and projectiles, and specimens from the museum of the College, and the Doctor's private collection, assist him in presenting his subject in a clear and instructive manner.

An interesting case of surgical injury, in which transfusion of blood was successfully employed by Dr. Thomas G. Morton, one of the surgeons of the Pennsylvania Hospital, has been recently under treatment in the surgical wards of the hospital. The patient, a young man possessing a hemorrhagic diathesis, was wounded ten days previous to admission, by falling on the fragments of a pitcher which he had been carrying in his hands, one of the fragments being forced up between the tissues covering the left superior maxilla, having entered on the inner surface of the upper lip. The efforts made to control the hemorrhage, which resulted by means of styptics and pressure, having failed, and the patient becoming much exhausted by the large loss of blood, it was deemed advisable to remove him to the hospital. On admission, Dr. Morton endeavored to occlude the bleeding vessel by acu-pressure, using for that purpose a long hair-lip pin, which was introduced on the right side, and carried beneath the base of the nose, emerging some distance on the other side. This being ineffectual, both fascial arteries were acu-pressed as they pass over the border of the inferior maxilla. The hemorrhage still continued, notwithstanding the application of pressure to these arteries, and the left common carotid artery was ligated. The ligation of this artery was successful in controlling the hemorrhage, though the patient was by this time in such a state of extreme exhaustion that death was imminent, and Dr. M. decided to try the effect of transfusion of blood. Two medical students furnished the blood that was required, which, after being strained and placed in a vessel surrounded by water at a temperature of one hundred degrees, so as to prevent coagulation, was injected by means of a large hypodermic syringe (2 ounce) into the medeaii basilic veins of each arm. In this manner eleven ounces of blood were infused, the good effects of which were experienced in five minutes by a rallying of the pulse, and other indications of beginning re-action. No more hemorrhage occurred, and the patient rapidly recovered.

In this connection it will be interesting to note that transfusion

was first practiced in the early part of the seventeenth century, although its use in England and on the continent generally dates from the middle of this century. The first operations were on animals, and the first instance of its performance on man, if we except that described by Lebrarius, was in Paris, by Denys and Ennuerez, in 1666. In this, and in subsequent cases, the blood of animals was employed, but owing to the discovery of the difference in the character of the blood corpuscles of animals and of the human subject, the transfusion in later times were from one individual to another of the same speceies.

Dr. Blundell, the eminent accoucheur of England, has showed the value of this operation in obstetrical practice, by means of which many lives are saved in cases of exhaustion from hemorrhage. Prof. Landors, of Greiswald, has tabulated ninety-nine cases in which transfusion was performed on account of hemorrhage, with the following results: In eleven case there was, from the first, no hopes of success—in twenty the operation failed—in three the result was doubtful, and in sixty-five, or nearly three-fourths, it was successful. Such results should commend the operation to practitioners, and should induce its employment in all cases where death from hemorrhage is imminent. The operation is sufficiently simple, care being taken to avoid the introduction of air into the vein. A case has been recently on trial in one of our courts, in which an attempt was made to establish a charge of mal-practice against Dr. Addinell Hewson, one of the surgeons of the Pennsylvania Hospital, for the employment of the dry-clay as a surgical dressing. The patient was admitted into the surgical wards under the care of Dr. H., for severe injuries sustained by the explosion of a coal oil lamp thrown at him with evil intent by the prisoner on trial, a young man of nineteen. Dr. H. testified that the patient, on admission, was suffering from severe burns of the whole face, chest and upper extremeties; part of the burn was superficial, but the greater portion of it was a deep burn, such as is constantly seen in accidents resulting from coal oil explosions. Death occurred on the sixteenth day after admission, from tetanus. In a long cross-examination in regard to the effect of the earth treatment, Dr. H. stated that the object in this case was to exclude the air, but other than this he was unable to tell the effect—that the pressure of the dressing did not affect the tissues beneath—that the tendency of the earth-dressing in a case of this kind is to assist nature—the first four days the dry-earth was used, after that it was discontinued on the face, but kept on the arm, and then resumed on the seventh day on

the face, at the earnest wish of the patient. On the sixth day water-dressings, with glycerine and carbolic acid, were resorted to, and maggots began to appear in consequence of the flies, resulting from painting the shutters of the ward.

In opening the case for the defense, the counsel stated that it would be shown that the only effect of the earth was to exclude the air—in all other respects it was a negative dressing, and therefore did positive harm—that the disinfectant qualities of the dry earth were entirely lost when it becomes saturated with fluids—that the use of the earth in this case led to the presence of the maggots, and that in removing them by a stream of water, the system of the patient sustained a severe shock, and tetanus was produced. The principal witness for the defense, by whom the above points were to be established, was one of the resident physicians on duty in the surgical wards under Dr. Hewson, who testified that his experience as a medical practitioner (a graduate of a few years' standing) led him to believe that the clay did no good in any instance. After the testimony of the resident physician, and of other physicians, who testified that they did not know enough of the earth-treatment to express an opinion, the charge of mal-practice was abandoned, and it was agreed to leave the case wit the jury, with recommendation for a verdict of guilty of voluntary manslaughter. The jury returned a verdict in accordance with this recommendation, and the Judge, in passing the sentence, stated that he felt called upon to remark that nothing developed on the trial had in the least tended to show that death resulted from the medical treatment.

We have received from Prof. Rand, Dean of the Jefferson Medical College Faculty, a catalogue of graduates of the Jefferson Medical College, from its organization in 1826. Of the five thousand, six hundred fifty-one students graduated during this period, one thousand, six hundred and eighty-two were from Pennsylvania; Virginia, nine hundred and forty-two; Georgia, two hundred and eighty; Kentucky, two hundred and forty-five; North Carolina, two hundred and thirty-eight; Ohio, two hundred and five; New Jersey, one hundred and eighty-three; New York, one hundred and eghty-two; Tennessee, one hundred and seventy-two; Alabama, one hundred and seventy; Mississippi, one hundred and fifty-one; Maryland, one hundred and forty-nine; South Carolina, one hundred and thirty; Missouri, one hundred and six; Indiana, ninety-nine, and a varying number from the other

States. The East Indies, Hungary, Turkey, Switzerland, New Foundland, Costa Rica, St. Cruz, Wales, Sweden, Corsca, Mexico and Nicaragua are each represented by one, while England, Scotland, Ireland, France, Barbadoes, South America, Germany and Cuba contributed from two to eleven each. The list contains some of the most distinguished names in the profession, men who are eminent as teachers and practitioners. One of the oldest graduates of the college is Prof. Mears of the Indiana Medical College, who was a member of the class of 1827. Prof. Gross graduated in 1828.

On the 20th ult. a special meeting of the College of Physicians was held to hear Prof. Gross' memoir of the late Prof. Robley Dun glison. The subject was treated in the easy and graceful style so characteristic of the distinguished memoirist, and the memoir was a perfect portraiture of the character and achievments of his late illustrious colleague. As an evidence of the amount of literary work performed by Prof. Dunglison, and of the high estimation in which his writings were held, Prof. Gross stated that up to the period of his death, one hundred and sixty thousand volumes of his various books had been issued from the press. Notwithstanding the time and labor required for the accomplishment of the many self-imposed duties, he always had time to receive those who called upon him, and so well regulated were all his movements that he never appeared to be in a hurry. Distinguished for his *bonhomie* and generous hospitality, he enjoyed to the fullest extent the pleasures of social intercourse, and often terminated a hard day's work with a party of friends at the opera or theater.

The woman-question, in its medical aspect, has been very vigorously discussed in our public journals during the past ten days. The immediate occasion of its prominence at this time was the reception tendered to a number of "lady students of medicine" who, in accordance with a resolution of the Board of Managers of the Pennsylvania Hospital, granting them the freedom of the Hospital, attended the medical and surgical clinics on the 6th inst. It appears that this resolution of the Board was adopted without paying the medical staff the compliment of consulting it in reference to the expediency of introducing mixed classes at the clinics. During the progress of the clinics there was a good deal of hilarity prevailing, which a member of the Board, who was present, attempted, with a mistaken idea of his duty, to repress. At the termination of the clinics, and as the "lady students of medicine" were departing, some of the male students indulged

in what one of the papers characterized as unmanly conduct—"behaving in a boisterous and unfeeling manner"—"saluting them with taunts and jeers, mock applause and real hisses." Each day some of the public journals contained articles inveighing against the male students as a class for the bad behavior of a few. Feeling themselves harshly treated, and recognizing the fact that if mixed classes were permitted at the clinics, they would not derive the full benefit of the instruction for which they had paid, the students of the University and Jefferson College held meetings, and determined that they would remain away. Subsequently the matter was transferred to the Faculties of the respective colleges, who had a joint conference, the result of which was the preparation of a strong protest, to be signed by the Faculties of the University and Jefferson College, the members of the Hospital staffs, and by the profession at large, against the introduction of mixed classes at the clinics. This document, duly signed, will be presented to the boards of managers of the various hospitals on the the 22d inst., and no doubt will be effective in deciding the question.

Prof. Boëck, the distinguished Syphelographer of Norway, spent a few days in our city last month. He had the opportunity of making the acquaintance of our prominent medical men at a handsome reception tendered him by Prof. Gross. J. E. M.

MADISON, NOVEMBER 4, 1869.

EDITOR WESTERN JOURNAL OF MEDICINE—*Dear Sir:* At the present time, when so much energy is being displayed in developing the natural resources of our hoosier State, for the benefit of the mechanic arts, I feel disposed to communicate the results of an investigation of one of nature's gifts to our own divine art—the mineral waters of French Lick.

Since the earliest settlement of Indiana, in the seventeenth century, these waters have been known to possess rather remarkable chemical and medicinal qualities; but until lately their constitution has been only cursorily examined, and consequently their use in the treatment of disease has necessarily been of an empirical sort. The large number of invalids annually resorting thither apply them as a panacea for all ills. This, in some cases, has resulted in no good, and in some even detriment.

In August I visited French Lick, and subsequently made a careful quantitative analysis of the principal waters.

It is situated in a beautiful valley, tributary to that of Lost River, about the centre of Orange county, ten miles from Paoli and eighteen from Orleans, on the New Albany & Chicago Railroad.

The low hills bordering the western side of this valley are composed of ferruginous sandstone, and the upper limestones of the subcarboniferous strata of this district. From their base flow a large number of springs, more or less impregnated with mineral matter. Half a mile from the French Lick Hotel, on the farm of Mr. McCracken, is a delightful, pure chalybeate spring. Most of the other sources in the valley afford sulphur waters. Near the hotel are the remarkable sulphur springs which have made the valley so noted. There are more than a dozen of these, but all seem to be derived from three parent springs, which are situated within an area of half an acre, but which exhibit a considerable difference in constitution.

The most important of these—Pluto's Well—as I have taken the liberty to name it, is remarkable for the production of a large volume of *the strongest sulphur water in the world*. Its constitution is as follows:

In a wine-gallon—

FREE GASES.	CUBIC INCHES
Sulphuretted hydrogen	*25.05*
Carbonic acid	15.00
SALTS.	**GRAINS.**
Chloride of sodium	140.54
Chloride of calcium	5.35
Sulphate of lime	60.59
Sulphate of magnesia	18.12
Sulphate of soda	22.37
Carbonate of lime	6.92
Carbonate of magnesia	1.59
Carbonate of iron with alumina, a trace.	
Loss	.54
Total of salts	256.00

No springs on this continent, as yet analyzed, afford more than a fourth part of the quantity of sulphuretted hydrogen found in this source, and very few in any part of the world approach it in this particular. The famous Sulphur Springs of the "Old Dominion" contain only from two to six cubic inches in the gallon.

THE WHITE ARBOR SPRING

Presents the following constitution. In a wine-gallon—

FREE GASES.	CUBIC INCHES.
Sulphuretted hydrogen	17.000
Carbonic acid	10.116
SALTS.	**GRAINS.**
Sulphate of lime	141.000
Sulphate of soda	36.720
Sulphate of magnesia	29.330
Chloride of sodium	90.920
Chloride of potassium	5.010
Chloride of magnesium	8.040
Carbonate of lime	20.280
Carbonate of magnesia	4.500
Carbonate of soda	10.527
Carbonate of iron, with alumina	2.500
Silica	1.700
Loss	1.473
Total of salts	352.000

This spring contains more saline matter than the first, and a large amount of sulphuretted hydrogen.

The last of the three sources at the base of the hill is very strongly saline, but contains much less sulphuretted hydrogen—its solid ingredients consisting of chlorides, sulphates and carbonates of lime, magnesia, soda, &c., with a considerable quantity of iron, amount to four hundred and twenty grains to the gallon.

The smaller springs, derived from these, have about the same constitution.

All these waters have about the same medicinal effect. They are alterative and tonic when moderately used. In large quantities, they are powerful hydragogue eliminators, acting upon the bowels, kidneys and skin, without, however, producing the irritating effect which this class of agents usually induces when prepared in a pharmacy less perfect than that of Nature. They are especially adapted to the treatment of the diseases of the skin, dyspepsia, constipation, chronic inflammation of the various mucous surfaces, scrofula, rheumatism, all specific diseases, and, in fine, may be beneficially used in all chronic affections where an alterative and tonic effect is desired. Moreover, the relaxation and recreations afforded here are important adjuncts which the broken down denizens of the busy city will highly appreciate.

Yours, &c., JOSEPH G. ROGERS.

MISCELLANY.

PARIS: SENATOR NELATON AND THE MICROSCOPISTS.

A few days ago *Figaro*, one of the well known literary journals of this city, issued a sort of album-number (*numéro-album*), containing short notes from several scientific and literary celebrities, which had been specially contributed to the number. Amongst these are a few lines from M. Nélaton; and as they have been much commented upon, and have already drawn forth a protest from a distinguished Parisian surgeon, I am sure you will take some interest in perusing them. M. Nélaton was desirous, it would seem, to manifest his opinion in favor of the high value of clinical surgery in face of the growing pretensions of microscopical and chemical researches, and thus expressed his thought in the pages of *Le Figaro:*

"I am happy to see the rising generation refuse to follow those false appearances of exact and profound science borrowed almost exclusively from microscopical research, and attach itself to the study of surgery, based upon the great indications furnished by clinical observation. It is because they drew their inspirations from these principles that the great masters of the beginning of this century, and especially Dupuytren, the most glorious amongst them, have given to the French school that legitimate renown which it still enjoys throughout the whole world."

As might have been expected, these two short passages have created quite a sensation among that portion of surgical workers which they seemingly attacked, and have already met with a sharp retort of protestation from the pen of professor Verneuil, of the Paris Faculty. The blame thus laid upon microscopical investigators by so high an authority as Nélaton, and published in so widely circulated a journal, has stung M. Verneuil to the quick; in the name of the injured parties he vindicates the value and importance of the microscope. The article appeared last week in the columns of the *Gazette Hebdomadaire*. After having stated what great results the microscope has afforded in the hands of such men as Robin, Broca, Lebert, Davaine, Virchow, Kölliker, and others, and after having mentioned that it had now become the indispensable complement of anatomical research in the dead-room, throwing a brillant light on the origin, the evolution, and the transformation of those innumerable lesions which destroy man, M. Verneuil asks M. Nélaton whether he believes that *all* surgical science may be acqired in the wards of an hospital. If not, and if, on the contrary, he (M. Nélaton) admits the assistance of the accessory sciences, if he make use of chemical agents and of physiacl instruments, if he practises vivisections, if he utilizes statistics, if he consults J. L. Petit, Scarpa, Langenbech, and Syme, why should he disdain the microscope? "For if it is good to prognosticate stone by the aid of a

sound, polypi with the laryngoscope, and amaurosis with the ophthalmoscope, paralysis by means of an electric machine, diabetes with potash, why reject the lens for recognizing leucocythæmia or spermatorrhœa?"

Further on M. Verneuil says that, far from agreeing with M. Nélaton on the present tendencies of the French surgical school, he takes quite a different view of the matter. "In approaching the difficulties of clinical study, the living generation arms itself at the outset with all the resources which are generally lent by the sister sciences; it holds out its hand to the ancients and the moderns, to the English, the Germans, and the Italians, in order to borrow facts and ideas; it divides its time between the laboratory and the dissecting room, the library and the hospital; in a word, it renounces no source of instruction, being neither so senseless nor so vain as to repudiate whatever may render science more complete, and practice more efficacious."

M. Verneuil has a curious remark with regard to the mention of Dupuytren's name in Nélaton's article:—"If the article is written but with the object of celebrating Dupuytren, it was really not worth the while. Enough has been said, I think, of that ambitious despot, who obtained fame, wealth, and honors, but has not deserved that true glory reserved, thanks be to God, to true *savants*." This opinion, coming from a French surgeon, will surprise not a few of my readers.

Such is a rapid sketch of M. Verneuil's article, which has been the medical *morceau* of the week. I need not say that it is interspersed with home thrusts at the Senator's address. A somewhat invidious view of Nélaton's contribution to the *Figaro* has been taken by some; and amongst other things it has been said that the mention of Dupuytren's name is a covert comparison conceived in view of the public. But surely the celebrated surgeon—I mean Nélaton—was fully justified in upholding an opinion which is rapidly gaining ground—to-wit, that the engrossing study of infinitely small details, though having, of course, its importance, has thrown clinical observation rather into the shade, and that "the great lines of clinical surgery" are not cultivated with that peculiar care which they deserve. For my own part, I believe the above remark is especially applicable to this place. The practical study of surgery is much neglected here. The want of this necessary culture is observed even among the rising surgeons in the Paris hospitals; and I could, if I wished, back up this assertion by the relation of certain facts which have occurred only during the past fortnight.—*Paris Correspondence of London Lancet, Oct. 2, 1869.*

The ladies may now be at rest. One British University will take them in and make female physicians of them. The Council of the University of Edinburg has refused to be less gallant than the University Court, even with the lead of the irrepressible Dr. Phin and Dr. Andrew Wood. Prof. Masson and Dr. Bennett led the pro-lady party of the Council; the former maintaining that "the sphere of women" had not yet been fully developed or defined; the latter arguing that if Edin-

burg did not admit lady students, they would have to go all the way to Paris. We shall not oppose this decision of the University, though in neither the speech of Professor Masson nor that of Professor Bennett do we see any very powerful arguments for women becoming physicians. The responsibility, however, now rests with themselves. The legal way is open, and it is for themselves now to consider whether Medicine is a womanly calling. There should be no misunderstanding about one or two points. First, that if ladies are to enter a sphere so difficult and to them somewhat delicate, there can be no plausible reason for excluding them from any other sphere. Professor Masson must reconcile himself to fair professors of Belles Lettres, that may prove serious competitors with the present male monopolists of Rhetoric; and Professor Bennett may find some day the Institutes of Medicine very freely re-arranged by the ladies whom he is so politely introducing to the study of medicine. If ladies may be physicians, then they may be anything. This may he all right; but if so, then woman must not be considered, as hitherto, the complement of man, but as his competitor. How this will relieve our social and economical difficulties or add to the pleasantness of the position of woman is not very clear to us. If women would show their complete equality with men, let them emigrate as freely as men are doing, and give grace and comfort to the life of their fellow-countrymen who have to go abroad, not because they like it, but because there is not room for them at home, and colonization is the destiny of Britons. Let them give themselves to the womanly science of making home-life easy and practicable and pleasant to men.

The action of the University of Edinburgh does not remove the difficulty. It only shifts it. All the objections to women entering the medical profession remain, and have now to be considered by ladies themselves. The process of medical education can not be a very nice one for young ladies under the most favorable auspices, and with classes apart, as, we understand, is to be the arrangement in Edinburgh. It is inconceivable that lady students should pass through a course of medical study in a large medical school without some harm to that delicacy of feeling which has hitherto been one of the most exquisite charms of the female character. And the duties of the actual practice of Medicine are still less congruous with womanly strength or feeling, or any other female quality. We presume that lady practitioners will have to be unmarried. No married gentleman worthy of his situation wonld like his wife to be a practitioner. And yet how unfit seems a young unmarried lady for the duties of medical practice.

Supposing all these objections to women entering the profession of medicine answered, there remains another—Will they be acceptable to the public as medical advisers? This seems very doubtful. It is said they are adapted for practice among women and children. We must say that we know of no demand among women generally for lady medical advisers. There are a few ladies just now who seem to think of nothing else than the magnification of their sex, and who propose

to revolutionize society in prosecution of this idea. But they do not represent the general feeling of women. And as far as our observation goes, it tends to show that lady practitioners will not be very acceptable as physicians even to their own sex. Something is to be said for allotting to them the department of midwifery; but even here, we believe, medical men would be preferred, and it is a laborious branch of practice that would be a hard means of livelihood for a delicate unmarried girl. She would doubtless simply come to a friendly arrangement about night-calls with the nearest medical bachelor, and a partnership would soon be arranged. Altogether, we would advise ladies to think twice before they enter the medical profession.—*London Lancet, Nov. 6, 1869.*

EDITORIAL AND MEDICAL NEWS.

THE Fourth Volume of the *Western Journal of Medicine* is completed with this issue.

The first number of the Fifth Volume will be in the hands of our readers in a few days. As will be seen by a notice which appears in this issue from the Publishers, some important changes have been made. In the first place, the *Journal* will be edited by Prof. David W. Yandell and the present Editor. Dr. Yandell's name is familiar to the American profession; the son of an eminent teacher—a teacher who is also one of the best writers Medicine ever had, and whose valuable contributions have enriched the pages of the *Journal* during a few months past—worthy son of such a sire, he has the intellect, the culture and the large experience which would be invaluable in the editorial conduct of any medical periodical in the world.

In the next place, all relating to the publication of the *Journal* passes into the hands of that eminent publishing house, John P. Morton & Co., of Louisville. What a load of anxiety and care is lifted from us by this arrangement, no one who has not been placed in similar circumstances can conceive.

Then the *Journal* will be devoted to *Therapeutics*, making it the representative of American Medicine in this regard, as the *Practitioner*, so ably conducted by Dr. Anstie, is of British Medicine. We believe it will meet the wants of our busy practitioners to a degree that no other journal in the United States does—that it can be made

a necessity to the great mass of intelligent and industrious physicians. The times, so rich in hurrying progress, demand such a journal.

Again: The *Journal* will be put on the cash basis. The January number will be sent to all old subscribers, but those who do not remit their subscriptions will receive no other numbers. We have lost hundreds of dollars by crediting; we are quite willing to take fifty per cent. for some three thousand dollars of accounts, if any one is anxious to make a speculation! Even were that per centage paid, we would still count our loss in four years at three thousand dollars.

These pecuniary losses make part of the dark side of the picture of our quadrennial labor. And darker still the purposed annoyances, the ingratitude, and downright meanness of a few medical men whose names we are half tempted to hold up for the contempt of honorable gentlemen in the profession.

But we pass these false friends of Medicine by, hoping to have grace to forgive them for intentional and causeless injuries, and knowing that Time, and Truth working therein, will ultimately silence the slanders of coarse ignorance and malevolent ingratitude.

But there is a brighter side. Two years and a half ago the *Journal* had but about three hundred subscribers; it now has more than a thousand. It ranks among its friends some of the best and some of the most celebrated names in the American profession; many of the contributors, especially in Indiana, Ohio and Kentucky, are among the ablest medical men; its contributions we frequently find republished in American and in foreign journals; it has become a permanency in the periodical medical literature of the country. Kind letters of encouragement from men whose good opinions we value highly, have cheered us in the midst of labors that have been by no means trifling; even warm personal friendships have grown out of our editorial position.

While we arrogate no great success, we have faithfully tried to do our duty; as truth and right seemed to us, so we spoke and acted, though more than once urged to live for policy, to enlist the favor of this indifferent one, or silence the tongue of that malevolent, by praising them for work they had not done but might do, for abilities they had not shown but might show, all of which kindly-meant advice seemed to us like the interrogations that follow: "Stranger, does your brother like butter-milk?" "I have got no brother." "But if you had a brother, would he like butter-milk?" Policy may do for those who have no convictions, who float along upon a current of

expediency, and whose opinions change oftener than the moon, so as to suit the views of every one with whom they may be thrown; but such a life is grovelling in the dirt with a muck-rake, careless of the golden crown which awaits manly, up-looking, up-striving endeavor. Temporary success may reward the arts of a policy-man, but there can be no true greatness, no real growth, without personal integrity and conscientious devotion to the *Right*, and such devotion, in the face of opposition, if it need be, not because of any incidental or possible reward, but because it is right. There is a higher court than a little, ephemeral, prejudiced coterie or clique to judge every man, and that is the judgment of the wisest and best, who do not live in the fogs of local prejudice and misrepresentation. There is a higher court than either, that will one day pass upon the lives of each one of us: for these broader, juster, and more enduring judgments let each one fit himself, working out his salvation unto these ends, and not for any perishing purposes and plans of the hour.

And now, with the kindest wishes for the happiness of our readers, happiness here and hereafter, and with heartiest thanks to our many friends for their encouragement and for their contributions, we bespeak their efforts in behalf of the *Journal* under its new auspices: we know that it will be eminently worthy any efforts they may make, either in writing or procuring subscribers.

THE AMERICAN PRACTITIONER—FORMERLY "WESTERN JOURNAL OF MEDICINE"—A MONTHLY JOURNAL OF MEDICINE AND SURGERY—TO BE ISSUED JANUARY 1, 1870, AT LOUISVILLE, KY.—EDITED BY DAVID W. YANDELL, M. D., AND THEOPHILUS PARVIN, M. D.—TERMS, THREE DOLLARS A YEAR, INVARIABLY IN ADVANCE.

It is intended that the *Practitioner* shall be a first class journal.

It will be devoted EXCLUSIVELY to PRACTICAL medicine and Surgery.

It will contain contributions from the leading medical writers of the country.

Its selections will be made from original copies.

Its reviews will aim to extract the practical parts of such works as are noticed.

The aim of the editors will be to conduct the journal in the exclusive interest of the busy practitioner.

The publishers will issue it in the very highest style of the typographical art.

They have a list of TEN THOUSAND physicians living in the West and South.

As an advertising medium it will be unequaled by any medical periodical in the United States.

☞ Letters, communications, etc., should be addressed to the publishers, JOHN P. MORTON & Co.,

Louisville, Ky.

WE ARE in receipt of the Washington *Chronicle*, December 10th, containing an able communication on the proposed murder of Dr. Paul Schoeppe by judicial authority on the 22d inst. Dr. S. is a German, a graduate of Heidleberg, and has been practicing his profession at Carlisle, Pa., where his father resided for many years, and had charge of the Lutheran congregation there. A Miss Steinnicke, of Baltimore, a maiden lady sixty-five years of age, visited Carlise in the summer of 1868, suffered from some indisposition, and was under Dr. S.'s professional care. A warm friendship sprang up between them, and upon her return to Baltimore, they corresponded; he was poor, she wealthy, and she advanced money to the Doctor to assist him. In the fall she visited Carlisle again, remaining till her death, which took place on the 25th of January last, she having been taken seriously ill on the day previous. She left her property to Dr. S. A *post-mortem* examination, made most carelessly, thirteen days after death, and the statement of the chemist, who received two hundred and fifty dollars for his investigation, that he thought he found "faint traces of prussic acid," were the chief ostensible causes of indictment and conviction. Says this contributor to the *Chronicle*, whom we recognize as an eminent member of the profession and a personal friend:

"The indictment against the Doctor charged him with willfully taking the life of Miss Steinnicke by the administration of poison; and, although not one iota of evidence, from beginning to end, went to sustain this allegation, yet the jury found him guilty of murder as indicted."

The medical press of the country is, we believe, unanimous in its denunciation of this verdict and the proposed execution.

Bearing upon this case we publish the following extracts, the first from the *Medical Gazette* of December 4th, and the second from the *New York Times:*

"THE CASE OF DR. SCHOEPPE.—The Governor of Pennsylvania, in the face of the unanimous protest of leading medical societies—in the face of the very testimony given at the trial—has signed the death warrant of Dr. Paul Schoeppe.

This exercise of the unrestrained prerogative of dispensing life or death may gratify his Excellency's sense of the supremacy of his official position; but we beg to assure him that, as far as any medico-legal evidence in the case is concerned, there is every probability that in directing the execution of Dr. Schoeppe, he is ordering the murder of an innocent man."

"INTERCESSION FOR DR. SCHOEPPE.—Dr. J. Roesing, North German Consul General in this city, states that he has received intelligence that Baron von Gerolt, the North German Minister at Washington, has seen Governor Geary at Harrisburg, Penna., relative to the Dr. Schoeppe case, and that the Governor has declared himself willing to revise the case from a memorandum which is being prepared at the office of the North German Embassy."

THE Indiana Medical College has seventy matriculants, sixty-eight of whom are males and two females: such success must be very encouraging to those who inaugurated and are conducting this enterprise. And now, without any unkind feelings towards this youthful institution, let us hope that its Faculty will never again issue a "Circular," announcing a *four* months' course, and their willingness to confer "*ad eundem* and honorary degrees": we seriously question the propriety of organizing new medical colleges that do not take advanced ground in the period of medical instruction, and in higher qualifications for medical degrees—three years in attendance upon lectures, each course being at least six months, annual examinations, those who finally examine for degrees entirely independent of the teachers—these are some of the steps a new school might take creditably to itself, and thereby earn the respect and gratitude of the people and of the profession of the entire country. Such an institution, by the way, we hoped to see established at Indianapolis, and the plan had been discussed by some medical gentlemen in the State, though probably nothing would have been definitely determined for some three or four years. We can not believe it wise, to return, to have merely a four months' course—it is retrograding, not advancing. And as to honorary and *ad eundem* degrees, more especially the former, these ought to be exceptional, and no public offer made of them, or medical college diplomas, now low enough, will still depreciate in value.

We have made these remarks, which can not be misunderstood by honest and intelligent gentlemen, in all kindness, and with the hope that they may accomplish some good. We recognize in some of the members of the Faculty of the Medical College of Indiana men of industry, ability, and honor, and we heartily wish their success.

At a recent meeting, November 4th, of the Clarke County (O.) Medical Society, some valuable observations were made by Dr. Wray on the subject of *Legalizing Dissections.* Dr. Wray is a member of a committee upon this subject appointed by the Ohio State Medical Society; and we are glad to see that he is so early and ably moving in the matter: we trust he will meet the hearty co-operation of every member of the profession in the State.

While Pennsylvania and New York have liberal enactments upon this matter, it is a shame that in Ohio, with some eight or ten medical schools, bodies for dissection must be obtained by stealth and violation of strict and unjust laws.

Indiana, and Kentucky too, should be moving to the same end: let these States, let all our States, have upon their statute books laws legalizing dissections.

(This note was received just as the last form was being made up: we have room only for its publication, and will answer it in the next:)

Mr. Editor: In your November number you quote from Dr. Tilt a sentence of Cicero's, as follows:

"*Nescire quod antequam natus esses factum sit, id semper esse puer.*"

The same quotation is used, very appropriately, by Osiander as a motto for his "*Geschichte der Ent findemgs kunst,*" but in a little different form:

"*Nescire, quid, antequam natus sis, acciderit, id est semper esse puerum.*"

Can you turn to the original and inform us which is the correct reading?

The *Times* obituary of the 21st inst. records the death, at North Tawton, of Catherine Budd, in the ninety-first year of her age. It is impossible to let this brief statement pass without notice, or without one word of respectful sympathy with her distinguished family. The deceased lady was the mother of nine sons, of whom the two youngest are members of the bar, and the other seven are physicians, all of more than ordinary repute. Among these seven, Dr. Budd, late of King's College, and Dr. Budd, of Bristol, will at once occur to the minds of our readers. We trust that they may inherit their mother's longevity, and may thus be spared for many years to do good work in the interest of mankind.—*Lancet, Oct. 23.*

Pay Up.—We beg our subscribers, who are indebted to us, to pay as promptly as possible. Remittances may be made to Robert Clarke & Co., Cincinnati, or to the Editor at Indianapolis. Again, we say, Pay up.

"WHAT BECOMES OF MEDICAL STUDENTS?"—This is the heading of a brief and brilliant article that forms a part of the fifth volume of the St. Bartholomew's Hospital Reports, recently published. Mr. Paget, the author of this article, has, with much labor and considerable perspicuity, given the reader an analysis of the careers of one thousand medical students, all of whom have been known to and observed by him, or by his colleagues, Mr. Callender and Mr. Thomas Smith, during a period of fifteen years. He has placed them in eight divisions, and tells us that twenty-three have achieved distinguished success, sixty-six considerable success, five hundred and seven fair success, and one hundred and twenty-four very limited success; that fifty-six failed entirely, ninety-six left the profession, eighty-seven within twelve years of commencing practice, and forty-one died during pupilage. Distinguished success is accorded to those who have gained important public appointments in hospitals or elsewhere, have maintained leading practices in very large towns, or have been teachers in great schools. Considerable success is ascribed to those who hold high positions in the public service or good leading practices; and fair success to those whose lot has comprised "that measure of well-doing which consists in having a fair practice (enough to live with), maintaining a good professional and personal reputation, or in holding ordinary appointments in the public services or in the colonies, and gaining promotion in due course of time." It will be seen that this last class constitutes rather more than half of the total number, and hence it is to this class in prospective that our observations on these statistics should be specially and particularly addressed. There can be no doubt that the lives of all professional men in this country, as in all other walks of life, are made up of constant and continual struggles, and that the so-called battle of life has to be fought with more than ordinary energy and perseverence by medical men. But these figures appear most happily at the beginning of the winter's work, and show our neophytes that a fair and reasonable measure of success may be and is attained by those who enter the profession, and labor therein honestly, perseveringly, and well. Mr. Paget's paper is commendable, chiefly because it encourages all to work; because it shows that honest work results in fair success; and because it proves, as far as figures possibly can, that if a proper and persevering course of study be pursued, failure is very much the exception, rather than the rule. And, as Mr. Paget very pertinently remarks, "nothing appears more certain than that the personal character, the very nature, the will of each student had far greater force in determining his career than any helps or hindrances whatever. * * * The time and the place, the work to be done and its responsibilities, will change; but the man will be the same, except in so far as he may change himself." —*London Lancet, Nov. 6, 1869.*